

SUPPLEMENT.

The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

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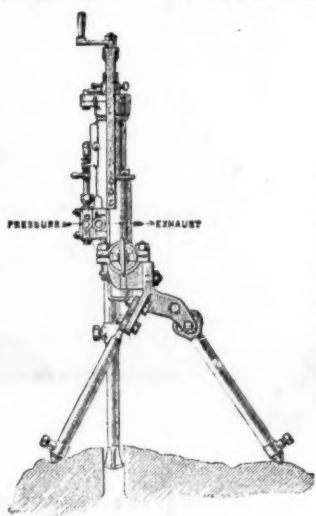
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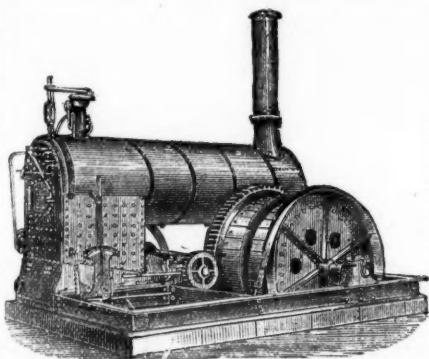
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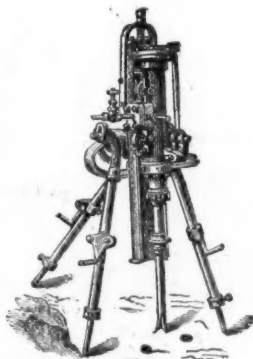
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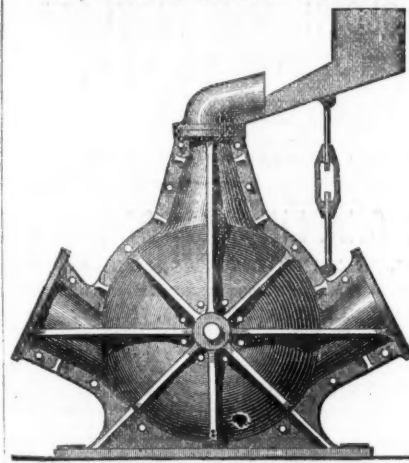
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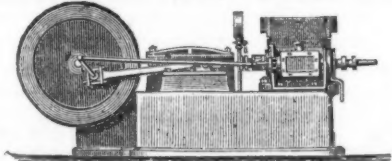


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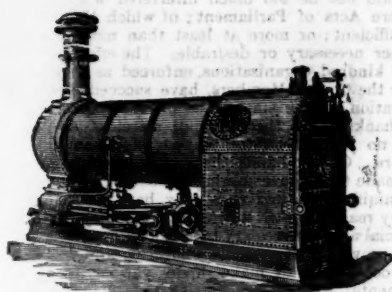
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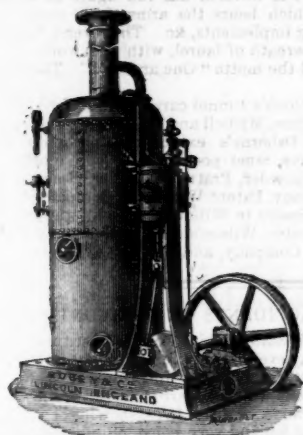
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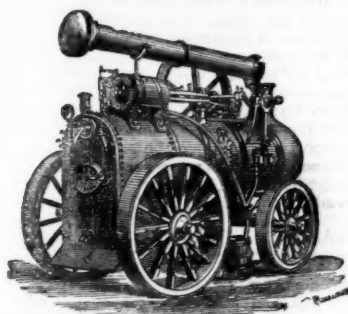
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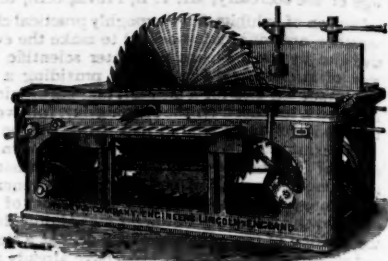
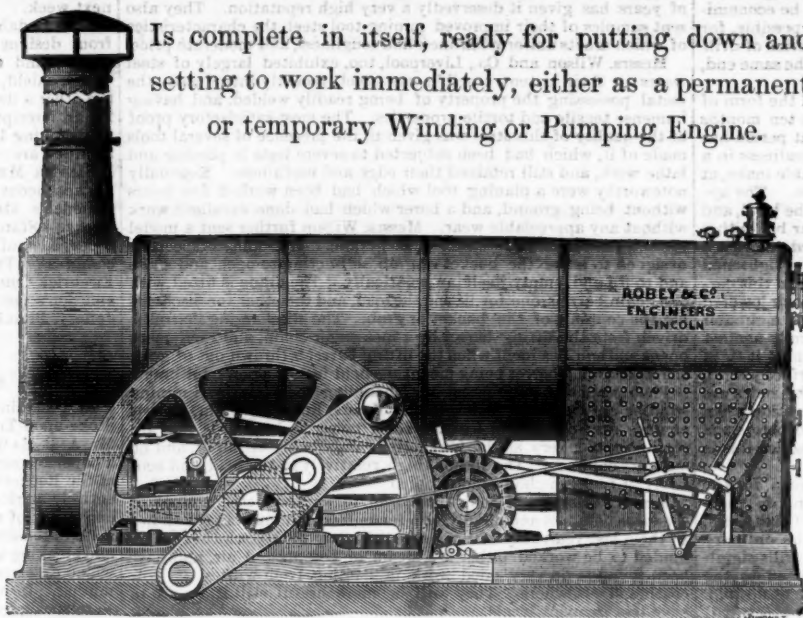
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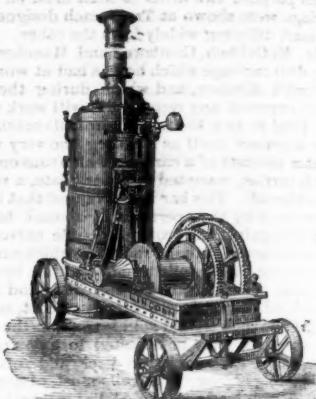
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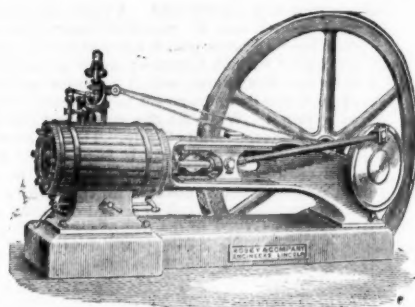
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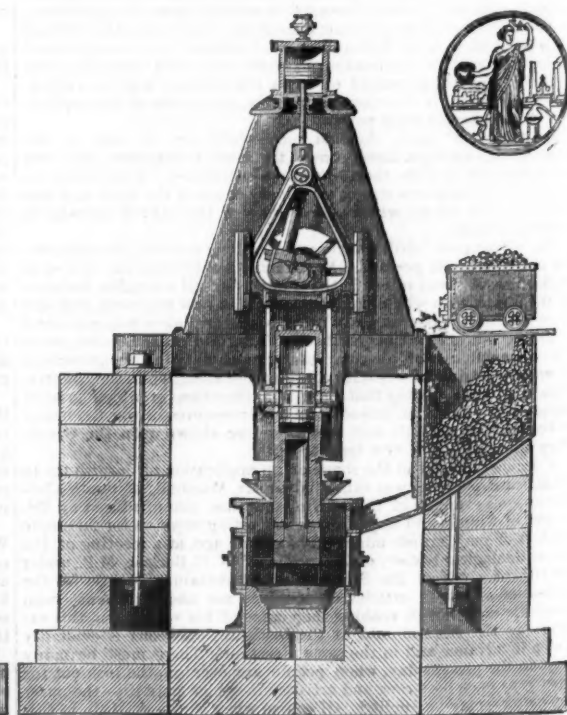
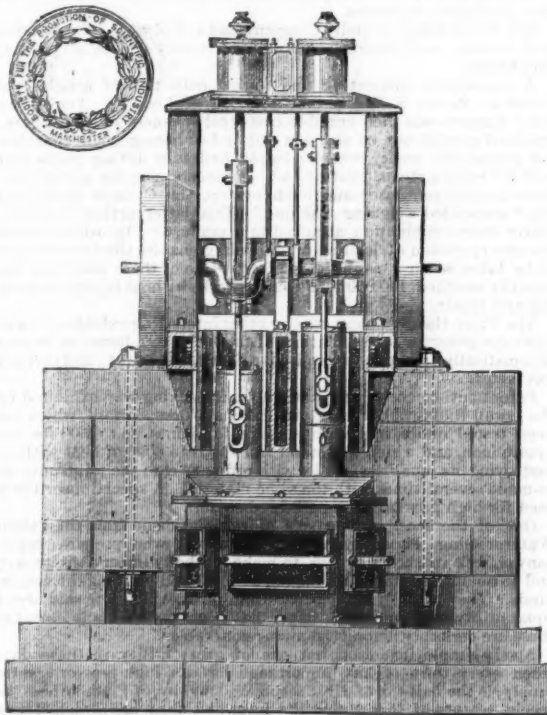
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EXHIBITION OF THE CORNWALL MINING INSTITUTE.

The annual exhibition of the Cornwall Mining Institute has been held this week at the Truro Town Hall, under the presidency of Capt. Josiah Thomas, of Dolcoath, and with the most satisfactory and encouraging results. Thanks to the energy, tact, and practical knowledge of the secretary, Mr. T. B. Provis, C.E., of Camborne, a capital collection of exhibits of a thoroughly practical character were brought together, and due care was had to make the event generally attractive also by the provision of lighter scientific "dissipation" in the way of microscopes, &c., and by providing a collection of pictures and arranging also for a pleasant musical evening. The arrangements included a luncheon on the opening day, followed by an address from the President, and a trial of rock-drills, &c., on the Thursday.

The exhibition itself was quite as full, but in greater variety, than either of its predecessors, and the determination of the council to award medals instead of certificates gave general satisfaction.

There is no need to enlarge in the columns of a practical paper like the *Mining Journal* on the importance of providing efficient means for the working of more than one rock-drill at a time in the most simple and effective way possible. We have already attained such a stage in the prosecution of mechanical boring that it is seen on all hands that the full effect of the machinery employed cannot be economically had unless the heading is advanced as rapidly as possible, for which purpose two drills at least must be used. Two forms of drill carriage were shown at Truro, each designed to answer the same end, but each differing widely from the other.

Mr. McCulloch, Camborne and Manchester, exhibited the form of rock-drill carriage which he has had at work for the last ten months in Cook's Kitchen, and which during the whole of that period has never required any repairs. It will work with equal readiness in a 5-ft. level or in a 10-ft.; and, from its substantial and stable make, at once approves itself as standing the very roughest usage. The apparatus consists of a carriage which runs on the rails in the level, and which carries, mounted on a bed-plate, a vertical tubular bar with a screw thread. This bar is so arranged that it may be raised or lowered at pleasure by the operation of a crank handle, and thus tightened securely against the roof. A double universal clamp upon this carries a horizontal tubular rack bar, which can also be raised or lowered at pleasure, and made to move either horizontally or in a circular direction. This bar carries the drills, and is pivoted firmly against the side of the shaft, a weighted ratchet, self-acting, keeping it tight even if the rock should splinter. Thus the carriage is perfectly rigid, and the drill may be adjusted to any angle. When the holes are changed the carriage is run back and returned to its position when the blasting is over. The rails must, of course, be cleared before the carriage can be fixed again; but we believe that in practice this is not found to cause any material delay.

The other carriage is an entirely new arrangement, shown for the first time, the invention of Messrs. Henderson and Son, of Truro. Their object has been to combine simplicity, strength, and cheapness, and they have sought to effect this by an addition to the ordinary column or stretcher, which enables them to work two drills simultaneously in a very narrow end. A block, or clamp, is fitted to the column, so that it can be raised or lowered to any extent desired. This block has two arms, which carry the drills, connected by a ball and socket joint in such a manner as to allow free play in every direction except downwards, which provides against over-weighting, and to enable the drills to be set to work converging or diverging in any way required. When set the arms are fixed by screws from behind, which lock the joints firmly. This is the whole arrangement, and it will be seen at once that it is as simple a device as well can be, and that immediately the holes are fired the drills can be set at work again without the removal of all the stuff being necessary. This new carriage was shown fixed in a kind of model end, and it will ere long, we believe, be put to the test of actual mining work.

In addition to their carriage Messrs. Henderson have also a new rock drill holder, and a new "saddle" or "cradle." The holder may be described as consisting of three feathers clipped by a ring and tightened by a bolt and nut—a very simple and secure arrangement. The special feature of the saddle is that it takes in the body of the drill, which is, therefore, fully supported. All three were shown by Messrs. Henderson in combination.

The "Eclipse drill" was one of the most prominent features of the exhibition, for it was to be seen mounted alike on the carriage of Mr. McCulloch and on that of Messrs. Henderson, and was likewise exhibited by Messrs. Hathorn themselves, with its latest improvements, as shown at the last Polytechnic exhibition. In conjunction too was shown the same firm's hydraulic tunnel column, which is tightened against the roof of the heading by working a small hydraulic press in the column stand, instead of as in the ordinary way by a screw. The arrangement is ingenious and simple, and allows of the application of very considerable power.

The "Barrow" drill, the first successfully set at work in the country, was amongst those shown, the same in character, but very much stronger in make than when first introduced. Experience has shown that it requires strong machinery to stand the wear and tear of our Cornish mines, which afford some of the hardest rocks to be found anywhere.

The "Champion" drill was represented by a series of photographs, but not in *propria persona*. Mr. Harris, we believe, has it now at work in six or seven mines in the country—itsself a notable instance of the favour with which machine boring is now regarded, and still more so when the operations of other borers are taken into account.

Messrs. Normandy and Stillwell, Victoria Docks, London, were the only exhibitors of air-compressing machinery, the improvement of which is beginning to excite considerable attention in the country, from a natural feeling that here is a direction in which greater economy may fairly be looked for. Their compressor was too heavy to be got into the hall, and was, therefore, shown upon the Green. They also exhibited a new form of drill.

A decided novelty in the shape of an application of Cornish tin to ornamental purposes was exhibited by Mr. Marshall, of South Condurow—an example of tin inlaying on brass, manufactured by Mr. Singer, of Frome, and important as suggesting new uses for the staple product of our Cornish mines. Some time ago, at a meeting of the Royal Geological Society of Cornwall, Mr. W. C. Borlase, M.P., under the title of a "New Tin Scheme," made certain proposals for the utilisation of tin in articles of domestic use and ornament—even personal; and though nothing then came of his suggestion, this exhibit (as Mr. Borlase said at the Institute luncheon) is evidently a step in advance and in the same direction. There must be many ways in the present day, when people are ever on the look out for what is at once both new and artistic, in which pure tin—the purer the better—may be applied. Of course when we speak of tin in this connection we mean the true metal and not that which passes in everyday life under that name—i.e., tin plate. Perhaps one of the most formidable difficulties which projects of this kind would have to encounter would be the inveterate habit people have of blundering on this very point. However we have great hopes of valuable possibilities for the new style of treatment. Of brass work in our houses we have now an abundance—almost too much, considering its generally unvarying tone and character; and there is no reason why the relief which the use of tin in conjunction either with brass or bronze would give may not be made widely acceptable.

An important exhibit was sent in model by Mr. Marsden, of Leeds, a machine which has gained a gold medal at Sydney, and which is designed to bring the most refractory material down to the finest powder. To effect this the jaws of the machine have a rubbing as well as a crushing motion, and the stuff is discharged into a "raff wheel," the periphery of which is made of wire gauze. Whatever will not pass through the interstices is raised in the buckets of the wheel and discharged into the hopper again. For Cornish mining it is, perhaps not likely that this excellent apparatus will be of much use; but its advantages for gold mining are already being well appreciated.

The Hasset Foundry Company showed the pulveriser of Messrs. Michell and Tregonning in use at Wheal Peever, which gained the first silver medal of the Polytechnic, and which has been too recently described in these columns to need detailed notice now. It will be

enough to remind our readers that the "roughs" are introduced into a revolving barrel by water, and that there they are rubbed down by simple trituration with scrap iron.

Messrs. Osborn and Co., Sheffield, made a very large and attractive display of their manufactures in steel of various kinds and qualities, chiefly in Muesett's Titanic lathe and cast steel, and their "special" steel. These were shown worked up in various beautiful models and small tools, and also in a number of mining implements—picks and hammers, mallets, and the like, some of which, to show the quality of the metal, were finished bright. A noteworthy and novel feature of the mining tools was that they were hafted with the best hickory handles, saving the miner, at a very small cost, the time and labour of "setting up." The firm also exhibited a number of crucible steel wheels and rollers of different kinds applicable to various uses in mines and day works, belts light and durable, and capable of standing the roughest usage, as the condition of a couple that had been beaten about without mercy by heavy sledges showed. There was a capital arrangement for skip use, with a brass bush let into the box of the wheel in such a manner that it could be replaced with the greatest ease. The wheels of this firm are largely used in the country.

Messrs. Guy and Co., Sheffield, likewise exhibited a large and highly interesting series of samples of their well-known "Invincible" tool steel, the undeviating excellence and uniformity of which over a series of years has given it deservedly a very high reputation. They also sent samples of their improved mining tool steel, the characteristics of which are its uniform hardness and toughness, and moderate price.

Messrs. Wilson and Co., Liverpool, too, exhibited largely of steel wares in their patent crucible cast-steel, recently introduced, the metal possessing the property of being readily welded, and having immense tensile and tortile properties. The most satisfactory proof of the quality of this steel was given in the presence of several tools made of it, which had been subjected to severe tests in planing and lathe work, and still retained their edge and usefulness. Especially noteworthy were a planing tool which had been worked five hours without being ground, and a borer which had done excellent work without any appreciable wear. Messrs. Wilson further sent a model of their patent self-acting crab bucket crane. This crane is specially designed to make the bucket or grab self-acting to open and close and to fill and empty itself automatically. The crane is fitted with two chain barrels, one for lifting the load, and the other for discharging the contents of the bucket or grab. The discharging barrel is driven from the lifting barrel by a messenger chain, and the bucket opens and empties itself when the lifting barrel is thrown out of gear, the discharging barrel being meantime held fast by a powerful brake.

Photographs of various engines, including their improved mining winding-engines, were forwarded by Messrs. Robey, Lincoln. These engines are made from 4 to 200-horse power and upwards, and are semi-portable, very slight foundations only being required, and no masonry chimney. The speed is high, relatively to the load, and economy of fuel is a chief point studied.

Messrs. Holman and Sons, Camborne, forwarded a steam winch of the same compact and handy form for underground haulage as shown by them last year, only with a larger cylinder. These winches are intended to be worked either by steam or compressed air, and have been found to do very good work in hauling from winzes at Dolcoath and elsewhere. They will be more useful still if we are to have less frequent levels.

Samples of steel rope were shown by Messrs. George Elliott and Co., Cardiff; one is now in use at Dolcoath.

Messrs. J. and P. Poole, Hayle, made a very large and attractive display of their perforated plates—iron, copper, zinc, &c.—with perforations of all useful sizes up to 350 holes in a square inch, for stamps, grates, riddles, and other mining and general purposes. These fine plates are all pierced not punched, an arrangement which gives them more lasting qualities, by enabling them to resist a far greater amount of wear and tear.

The Kennal Vale Gunpowder Company are represented by samples of their well known manufactures, and notably by their cylinders of compressed powder, the excellent qualities of which were so fully proved in the course of the experiments of the Explosives Committee.

Of allied character came the display of several kinds of safety fuse by Messrs. Bickford, Smith, and Co. Here the chief feature was the instantaneous fuse with wooden plugs, which has been proved as well adapted for simultaneous blasting of a number of holes as the electric arrangement which used to be deemed indispensable. These fuses were the subject of interesting trials.

A large display of their specialities was sent by the Plumbago Crucible Company, Battersea.

The Tuckingmill Foundry Company had a steel wheelbarrow, light, and durable, and several examples of Buckley's metallic packing for pistons.

A remarkably interesting and varied collection of articles was shown by Messrs. S. E. Ransome and Co., of London. Among the chief features was their crucible cast-steel spanners and gas pliers; artificial grindstones, so sharp in grit and so homogeneous that they cut almost like emery wheels; handy hydraulic lifting jacks, pan mill for mixing steam jointing, &c., engineers' copying press, anti-draught ventilator and chimney top, the Cyclops forge, and the "suspended weighing machine." This latter article is a very clever lever combination attached to a crane, &c., by which means the one operation of loading or unloading enables the exact weight to be taken when a package is lifted. One of these machines has actually weighed 400,000 tons in a gasworks without injury, or needing any repair.

The Truro Gas Company, among other interesting exhibits, showed Cox's gas governor for regulating all the lights in a house or factory automatically from one to hundreds; Stark's gas stoves; and Cowan's gas meter.

Patent anti-corrosive and anti-galvanic packing was exhibited by the Irwell India-rubber and Gutta Percha Works, Salford, which has been tested under hydraulic pressure for joints up to 500 lbs. per square inch, and which will stand from 500° to 600° of heat without destroying its qualities, while with ordinary care the joints may be re-made several times with the same material. A special insertion is used for high pressure or superheated steam.

One of the most curious sets of exhibits came from the Patent Waterproofing Paper Company, Willesden, who prepare paper, canvas, &c., in such a way as to make it wholly impervious to wet, and to render it suitable for roofing of sheds and buildings of various kinds. They actually show paper drain-pipes, which it is said are of equal utility to stoneware. Paper has been put to many uses, but these are certainly among the most remarkable.

A very simple invention, but one of great utility in these days when every town of any importance has its high-pressure water supply, is the ball-tap of Mr. Joseph Willoughby, of Plymouth. The special feature of this is that the lever and float are attached to a small plug made to work in the main plug within the casing. Among the advantages claimed for this are perfect action under any pressure, absence of vibration, non-liability to get out of order (for the absence of any leather stuffing, levers, or springs), while if the lever and ball should become detached it will close at once.

Excellent made miners' dials, theodolites, and other instruments were shown, respectively by Mr. Newton, of Camborne, who has introduced several combinations and improvements, and by Mr. Jeffrey, of the same town.

The Patent Exhaust Steam Injector Company were represented by their simple and effective invention.

Messrs. Lampen and Theedham, Wakefield, exhibited an assortment of brass and other engine fittings, &c.; Mr. Stanna, London, a patent pump; Mr. Collins, Lostwithiel, Harding's Hurricane forge; and Barlow's new heel-tip; while other exhibits included Pratt's velocimeter; and a model of Tresize's revolving calcliner, which the exhibitor claims to be the original of the revolving calcliners now so largely in use. It may be remembered that it was shown at the Polytechnic.

Quite outside all mining connections, but representing a very valuable branch of local industry, and which is likely to grow in importance, the St. Day Pottery Company had a stand well stored with their architectural and fire-resisting wares.

The inaugural address of Capt. Thomas as President was of a thoroughly practical character, and expressed the fullest confidence

in the future of the tin mining of Cornwall, of the history and prospects of which, indeed, Dolcoath itself may be taken as an inadequate and inappropriate representative. A considerable portion of the address dealt with the incidence upon the mining industry of the county of recent legislation; and there are few connected with it who will not endorse heartily the sincere hope expressed by Capt. Thomas that we "should not be too much interfered with in our operation by any more Acts of Parliament; of which there were already more than sufficient; or more at least than most mining men think to be either necessary or desirable. The efforts of the Mining Institute and kindred organisations, enforced as they have been most heartily by the County Members, have succeeded in producing some amelioration of the statutes as originally proposed; but while we are thankful for these "small mercies," as Capt. Thomas said, there is no reason whatever why an effort should not be made to obtain more. On all hands the most strenuous endeavours are now being made to improve mining procedure and practice in almost every ramification, and it is very hard that a progressive—and in a very real sense still a struggling industry—should be hampered by artificial and unnecessary hindrances.

The exhibition has proved in every sense a success; and we shall have some further comments to make upon various features, including the experimental illustrations carried out on Thursday, next week.

The medals, which are of two classes—silver and bronze—are from designs by Capt. N. Williams, Wheal Eliza, and are very tasteful and appropriate. The obverse has the figure of a miner with a shield, one half of which bears the arms of the county, and the other a device of mining implements, &c. The reverse has space for an inscription within a wreath of laurel, with the words "Cornwall Mining Institute," and the motto "One and All." The medals awarded are:—

SILVER MEDALS.—McCulloch's tunnel carriage, Bickford Smith's instantaneous fuse and igniters, Michell and Tregonning's pulveriser, Marsden's stone crusher, Osborne's exhibitor, Ransome's ditto; Bronze—Stanna's pump guys, steel pools, woven wire cloths, steel ropes, Kennal's compressed powder, Pratt's velocimeter, Normandy air compressor, Truro Gas Company, Patent Waterproof Company, St. Day Firebrick Company. Certificates to Willoughby's ball tap, Holman and Son's Tucking Mill foundry, Wilson's steel lampers, and The Day Jeffery, Plumbago Crucible Company, and Newton Aymouth.

MINING AND MINE ACCIDENTS ON THE CONTINENT

At a meeting of the North Staffordshire Mining Institute, held at Stoke-upon-Trent on Monday evening (Mr. John Brown in the chair), Mr. A. R. SAWYER, Assistant Government Inspector of Mines, read a paper respecting an accident which occurred at the Fontaines Pit at the Rochelle Colliery, France, in July, 1879, showing that it was entirely attributable to a sudden and very considerable spontaneous expansion of carbonic acid which was present in the coal in a high state of tension, and which burst out into the main dip, hurling along and breaking up the coal which contained it. This was a new danger, which deserved the careful attention of every body connected with mining. In what state was this gas contained in the coal? Was it, so to speak, intermolecular, or was it condensed under pressure in a cavity? The persistency of its disengagement in all the seams of the colliery led to the belief that its pressure was in an intermolecular state. Mr. Sawyer then proceeded to give some particulars taken from the report of the French Commission of Enquiry, which is to appear in the next number of the *Annales des Mines*. He confined himself to that part of the report bearing upon the pressure and disengagement of fire-damp, on account of its reference to sudden outbursts, which might be applicable to the accident to which he had alluded. "Although (he read) in the opinion of a large majority of practical men fire-damp pre-exists in the pores of the coal or of the surrounding rock in a gaseous condition, and subjected to greater or less pressure, the views of a certain number of engineers cannot pass unnoticed. They consider it as the product of disassociation at the last moment of very volatile liquid, or even solid compositions contained in the coal. This hypothesis has not as yet been borne out by chemico-scientific researches. Mr. G. Arnould, engineer-in-chief of the Belgian Mining Corps, cites the following observations in its support:—The fact that fire-damp is soluble in water, as has been shown, appears incompatible with the properties of marsh gas; the presence of certain hydrocarbons in the pores of the coal, which has been demonstrated by Messrs. Johnstone and Hutton; the discovery of a large quantity of a brown substance in the pores of the coal, by Franz Schultze, which at first prevented the structure of the mineral from being made out; a very volatile oil, which on being lighted produced a large flame, having often been found in company with hatchetina (a mineral tallow) in the central cavity of nodules of siderite; coal in fiery mines presenting sometimes a greasy and shiny appearance, which is almost immediately lost by exposure; fiery coals, and especially bituminous coals, also losing their caking property pretty quickly when exposed to the air. The sudden outbursts which occur more and more frequently in the neighbourhood of Mons, causing dreadful accidents, would seem to corroborate this hypothesis. These extraordinary phenomena, already noticed by Mr. Devaux, have been described with the greatest care by Mr. G. Arnould. They are always associated with the presence in the seam of a kind of combustible called *houille d'alouide* in Belgium, and *fusain* at St. Etienne. This black substance is fibrous and powdery, and is nothing but charcoal remains either of arborescent ferns, sigillaria or cordaites, which have preserved their structure. Bituminous coals often contain a pretty large number of layers of daloidic coal, producing in that case more dust and small coal. Accidents from sudden outbursts, unknown before 1847, even on an examination of official documents of as far back as 1818, are becoming more frequent every year, and seem to grow in importance with the depth. None have been observed above a depth of 280 metres. The greatest number have occurred at a depth of from 350 to 500 metres, but this must undoubtedly not imply a real maximum, for when greater depths are considered the number of mines decreases rapidly. Sudden outbursts have always been accompanied by a projection of a large quantity of small coal, which has sometimes filled the galleries for a distance of 40 metres, and whose volume has been as great as 420 cubic metres. Sometimes outbursts, instead of being sudden, are more appreciable. The phenomenon has often been accompanied by an intense refrigeration, and the pulverised coal has been found even after some time as cold as ice. This last circumstance would tend to meet one of the objections which have been raised to the non-gaseous condition hypothesis of fire-damp previous to its escape—the enormous refrigeration which would apparently accompany the volatilisation of such quantities of matter. But the mining engineer, Mr. Vicaire, has pointed out that certain substances, of which explosives are the most characteristic, instead of producing cold by their transformation, produce on the contrary an enormous amount of heat. Mr. Vicaire leans to the belief, *a priori*, that certain coals may approach this condition. He founds this opinion on the fact that their combustion produces more heat than does an equal weight of carbon and hydrogen. He also mentions that at St. Etienne cylinders of coal which were being compressed into fuel cakes and gradually heated became all at once incandescent spontaneously. In the Brassac coal field it is carbonic acid, more than fire-damp, which issues out of the coal, but the question remains the same. Very marked effects of projection have been observed there ever since the last century, and Lemonnier, member of the Academy of Sciences, describes them in terms which still today are of much interest to those who are acquainted with that district. The explosion of carbonic acid at Rochelle in 1879, and certain analogous observations from the tertiary measures of Auvergne by Mr. Tournaire, Inspector General, may be attached to this order of facts."

A vote of thanks was passed to Mr. Sawyer, whose paper was ordered to be printed.

VICTOR.—Mr. H. B. Vercoe (Dec. 8) writes:—Since the date of your Journal of 27th ult., I have applied to the directors of the Prince Patrick Lead Mining Company, asking their permission to allow me to superintend the East Long Lake Mine, which they refuse to grant; and I will thank you to insert this in your next Journal.

Original Correspondence.

THE LEAD TRADE.

SIR,—Our market is in a very unsettled state, and the lead refiners are unable to get orders for their goods, hence this continued falling in price, which should not be the case when the imports of lead this year are 4000 tons less than in 1879, and 6000 tons less than in 1878. Lead ore is also realising proportionately higher prices, as they are also scarce, and the close competition in each tender opened shows a desire on the part of smelters to get hold of ore to keep their works going, so that, all things considered, we should see an advance in price instead of a fall, but for the one fact—there are no orders coming in for such goods as pig-lead, sheet-lead, red and white lead. There was a sale by tender of 600 tons of Greek lead on the 2nd inst., and the following are the offers:—

	300 tons 50 oz. silver.	300 tons 50 oz. silver.
Messrs. Lock, Lancaster, and Co.	£15 0 0	£14 15 0
Cookson and Co.	14 17 6	14 17 6
Enthoven and Co.	14 15 0	14 15 0
Pontifex and Wood.	14 10 0	14 10 0
Locke, Blackett, and Co.	14 7 6	14 5 0
Foster, Blackett, and Wilson ...	14 7 6	14 5 0

This is considered a very high price, as the difference between Greek lead and rich Spanish was always from 20s. to 25s. a ton, but of late the Greek lead imported has been of so much better quality that the refiners will give nearly the top market price.

	£15 5 0	STOCKS.
Dec. 2.—250 tons rich Spanish, at	15 5 0	
90 " (90 ozs.) ..	15 2 6	
108 " (40 ozs.) ..	15 1 3	
Dec. 8.—343 tons rich Spanish	15 2 6	
150 " ..	15 2 6	
Newcastle-on-Tyne, Dec. 9.		

INDIAN GOLD MINING.

SIR,—Noticing in last week's *Mining Journal* that allusion was made to my name at a meeting of one of the Indian Gold Mining Companies, I beg to observe that whatever may be the value of any particular property, I cannot assume any responsibility for expressions of opinion of hearsay character said to arise from me, neither for statements in connection with these new gold fields that I have not authorised.—*London, Dec. 8.* OLIVER PEGLER, A.R.S.M.

SOUTH INDIAN GOLD MINING COMPANY.

SIR,—I am requested to state that there is not and never has been any connection between the Gold Company of Southern India and the South Indian Gold Mining Company, and that on May 13 last I protested to the Registrar of the Joint-Stock Companies against the recognition of a name so likely to lead to public misconception, but my objection was overruled. May I beg the favour of your insertion of this disclaimer and oblige, S. JENNINGS, Secretary.

32, Queen Victoria-street, Dec. 8.

MINING IN NEW SOUTH WALES.

SIR,—There is every sign of an active revival of mining enterprise again but, taught by the experience of the past, on a much quieter and safer system than before, and noticeably among the events of the month is the striking of a rich vein again at the once famed Hawkins' Hill (where tons of gold, literally, were got in 1871-72). The new find this time is in the Patriarch claim (as per telegram herewith), adjoining the Star of Peace property:—"Hill End, Thursday: The new find at the Patriarch Company's claim is opening out splendidly, coarse gold showing freely through the large vein, reminding one of old times. This discovery has caused great satisfaction here, owing to the plucky owners having for so many years persevered without any returns. The proprietors of the claims adjoining—the Star of Peace South, and Londonderry North—are jubilant at their prospects. The escort took 647 ozs. to-day." All the old miners seem to have believed in the "Hill," and that great finds were likely to be eventually made again, and if this one be indeed a true index of what is yet hidden, the Star of Peace claim will reap at last the fair reward of its seven years patient and business-like effort, for having secured, in addition to its own area, all the underlie (at a depth) of most of the old rich claims. If gold does, indeed, "make" again at the lower levels it will be something more than a fortune to its persistent proprietors. There are also new finds of reef gold in other parts of the colony, and also good alluvial at Temora, where over 1000 loads wash dirt are already stacked awaiting water, and over 40 lbs. weight of nuggets got from one claim in a few weeks, whilst several are also very lucky. Likewise, though rather limited, a new field at Bermagui, on the sea-beach itself; whilst on the Shoadah River, Holman (of Hill End formerly) is about working 25 acres of river bank, prospecting 2 or 3 dwts. to the load, and which, if the whole body averages the same, will make his "pile" again for him, as ground sluicing is both cheap and easy, and "quantity does it."

TIN is also looking up, as many abandoned (worked out?) claims are proving richer than ever by sinking to the second bottom (in some cases through the basalt); and for the first time for the last seven years a company was floated to work Wesley Brothers, 180 acres, on Vegetable Creek—40,000*l.* capital—of which the fortunate owner got 25,000*l.* in cash and the balance in paid up shares. So good is the ground known to be that all the shares were placed in one day, and they are now at a premium. From Inverell it is reported that very rich finds of tin have recently been made near that place, at a partially developed claim known as Brickwoods, at the Ponds. The prospect shows grand tin, and 3000*l.* cash was refused for it yesterday. The now celebrated Ruby Hill Tin Mine, near Inverell, shows a wonderful face of wash dirt. In places dirt is 16 ft. thick, and at the 25 ft. level there appears to be 2 ft. of solid tin. Great inducements are being offered to shareholders to float this claim in the Sydney market. This is in the alluvial; but whenever English knowledge and experience is brought to bear on our lodes then the field will be found very extensive, and probably permanent, as they outcrop in many places from a few inches up to a couple of feet thick, many samples assaying 40 per cent., and even more, of tin.

GOLD.—The subjoined telegram just in, if those reefs prove rich on trial it will help to strengthen the faith of our old miners in the yet undeveloped riches of Hawkins' Hill:—"Orange, Wednesday: Mr. W. Bryden reports the discovery of a rich gold-bearing reef, 3 ft. wide, at Chambers' Creek. The indications are said to extend half-a-mile, and the lead has been traced several miles. It is supposed to be identical with the rich veins at Hawkins' Hill Reef. The distance from Orange is 23 miles, Bathurst 26, and Hill End 16."

SILVER.—The working of this is very little understood here, but according to the Warden's report (official) it ought to be a very valuable addition to our mineral wealth if only properly treated. The report of Warden Graham on the Boorook Silver Mine is just to hand at the Lands Department. Mr. Graham states that the chloride ores in the Golden Age Mine are exhausted, having been worked out to a depth of 70 ft., at which depth the ores suddenly change from chloride to sulphide. There are no appliances on the field for the treatment of the sulphide. The yield in the reef worked in two acre lines to the depth of 65 ft. has been 50,000 ozs. of silver, valued at 10,000*l.* The reefs have been prospected to a depth of 140 ft., averaging 30 in. wide. In a table of samples Mr. Graham shows:—No. 1: Argenteriferous pyrites and blende, at a depth of 140 ft., produced 700 ozs. to the ton. Nos. 2 and 3, of the same description, at depths of 135 to 130 ft., produced 420 and 350 ozs. to the ton. No. 4: Argenteriferous blende, with pyrites, at a depth of 125 ft., gave 320 ozs. to the ton; and No. 5: Argenteriferous pyrites, in shale, at a depth of 140 ft., gave 170 ozs. to the ton. No. 5 may be taken as an average of the lode.

A splendid silver reef has been discovered within six miles of Cooma, and a company has been formed to work the lode, which has been leased.

KEROSENE SHALE.—This is being eagerly sought for, as the known deposits are few and limited, and for one block of 1500 acres the discoverer (not the owner) is asking 10,000*l.* for his pointing it out merely, and if it proves equal to sample and his statements he will probably get it, or at any rate a very good sum. There are only two companies at work here, and the orders for Europe and America cannot be executed so fast as required, so that another large mine or two would pay well if opened out, as there is plenty of room for their profitable working.

COAL is more settled, as despite discoveries in other places the superior proved quality of our Wallsend seams, and low freights from Newcastle, enable us to command the market, and even with coal at only 10s. per ton our Wallsend shares remain at a very high premium, and have only fallen slightly from what they were when coal was at 14s. (the selling price now being from 13*l.* 15s. to 14*l.* 5s.)

The steady opening up the country by our three lines of railway is also, at last, giving real impetus to mining, as it enables intending purchasers (or directors when new companies are formed) to visit property in 24 hours which seven years ago would have taken some days; hence greater watchfulness and corresponding confidence.

Sydney, Oct. 14.

R. D. ADAMS.

ANGLO-AMERICAN MINING.

SIR,—In last Saturday's *Mining Journal* your correspondent, Mr. J. J. West, of Chicago, whilst advocating the investment of British capital in the Rico Silver Mining Company, of Colorado, takes exception to what he is pleased to term my narrow and insular views of the vast field of mining industry, and is good enough to say that if I knew more about America and its mineral wealth I would hardly write as I did. I have read with interest the extract from a Chicago newspaper giving an account of an excursion on the Denver and Rio Grande Railway, but Mr. West's question as to whether there is a mining district in Wales or Cornwall for the development of which such a gigantic enterprise as the San Juan extension would be undertaken is unanswerable from two very important points of view, one geographical, and the other being that we already have railway communication both in Cornwall and Wales with the principal mining districts, and even a few special lines constructed for similar purposes to that to which the San Juan extension is dedicated. I can hardly agree with Mr. West in his statement that as a general thing English mining has not proved remunerative to capitalists. I am at a loss to know from what source he has got statistics on which to found such a statement. Mining has been carried on in Great Britain for many hundred years, and I rather think it still being carried on pretty actively, while I also know for a fact that there does exist a class of capitalists, and a numerous and wealthy class too, who have still a preference for home mining, and who have found it to be quite equal to any representations of prosperity which I have attached to it, and which Mr. West objects to. Your correspondent has at least the candour to admit that English investors have lost an immense amount of money in American mines and mining companies, and this he charges to excessive capitalisation, mines stocked for millions of dollars, lavish current expenditure, and incompetent or dishonest management; a rather severe, but no doubt true, indictment against American mining. He does well to call my views narrow and insular for preferring mining in my own country to American mining with these accessories. He may well say that if I knew more of America and its mineral wealth I would write differently, and this would also be true if some of the mineral wealth, the development of which has been so liberally subscribed for by English capitalists, would only come here and let us see it, but instead of this it persistently stays away, and ruin to some and heavy loss to others generally rewards the liberality and confidence of English investors in American mines.

All Colorado should be grateful to Mr. West for his courage and generous consideration in being the first to inform us that a new order of things is coming into vogue in Colorado, and that with sensitive honesty mining in that district will in future be carried on in the earth in preference to the pockets of the public. So noble an example might possibly find room for emulation in many of the outlying mining districts of the Union, and I shall watch its progress with great interest; meanwhile, during the various stages through which it must pass from its chrysalis state to its perfect development, I feel constrained to adhere, however ill-natured I may appear, to my narrow insular views. I believe the mines I mentioned, to which Mr. West alludes, are Bwlch United and West Lisburne, two exceptionally fine silver-lead mines in Cardiganshire. For the present, contrary to Mr. West, I should prefer 100*l.* in them to 500*l.* in a Colorado mine, and would sooner trust to an income from them than to the latter, especially until the new order of things comes into vogue.

29 Bishopsgate-street, E.C.

W. B. COBB.

SENTEIN COMPANY.

SIR,—The secretary's statement in last week's *Journal* must have come as a painful surprise to many shareholders. After reading it one can only ask what can have become of the proceeds of the sale of ore and of our large ore stock? I had certainly had the firm expectation of a large dividend next January.

From the reports published in the *Mining Journal* I find that the ore brought down to the dressing-floors since the wire-rope began to work in last May amounts to about 5175 tons, without allowing anything for ore carried in two periods of a fortnight each during the same time. For these two periods we may probably add 825 tons. This will raise the total carried by the wire-rope up to Nov. 30 to 6000 tons.

From the yearly report for 1879 I gather that the stock of ore at the floors was on Nov. 30, 1879, about 1800 tons. The lead and blende sold from Nov. 30, 1879, to Nov. 30, 1880, have, I believe, amounted to about 740 tons of lead and 1740 tons of blende, which is equal (say) to 5000 tons of mineral. This gives as the ore stocked at the floors on Nov. 30, 1880, about 2800 tons, to which must be added the ore broken at the mine, upwards, I believe, of 1200 tons. The total ore stock on Nov. 30, 1880, is thus about 4000 tons, against 2700 tons last year. The ore stock for last year was valued at over 7000*l.* In this I have assumed that no mineral at all was brought down from the mine between Nov. 30, 1879, and May, 1880.

From this it follows that the average amount actually carried by the wire-rope tramway in each week of six days is about 250 tons, or only about 40 tons a day. How absurd, then, was the description given by the directors in their report for last January of the wire-rope which they were then constructing as capable of carrying 100 or more tons of ore daily. How absurd their opinion of it in their circular of July 16 as a perfect success. And yet what has been carried was chiefly in fine weather. How much will be carried in bad weather? And what a huge sum has been lavished on this precious wire tramway. For remember, the true question is what can be carried day by day. Special trials are mere moonshine—simply delusive.

A wretched affair, indeed, the mine has turned out this year, if, as the secretary statement would lead me to believe, "the directors are not in a position to declare a dividend at present." That statement at least means that the outside of our profits for this year is measured by the value of our stock of ore. For it must be remembered that our profits, if any, for this year are all made. Our accounts are up to Nov. 30. We do not yet know how much our profit is less than the above. Yet the ore actually sold this year has realised about 14,600*l.* If the ore stock does measure all our profit our monthly expenses must have reached an incredible figure.

Too many cooks spoil the broth. The plain truth is that to have seven directors is the best way to ruin such a company. Responsibility is divided till no one feels it. The sooner we consider the question of the directors, who are after all agents paid to do their best for the company, the better will it be for us.

Our property is good, the dressing-floors and wire-rope are said to be all at last completed, the former at the very heavy expense, according to your columns, of 7000*l.*, which our generous directors have dispensed like lords.

Our average returns of lead are the wretched amount of some 60 tons each month, and of blende some 150 tons each month. The wanted carbonate does not figure in the sales at all. The directors' circular, dated July 16, estimated the total output when all is com-

pleted at 200 tons of galena and 300 tons of blende each month. The time fixed for completion was 10 weeks from that date—i.e., Oct. 1. The circular was itself a confession of great delays; and, judged by the facts, how very wrong it has proved.

What we want is to have our mine managed by men who will themselves thoroughly work out all the details. I earnestly trust that shareholders who remember what was promised in last year's report, and how flagrantly the board have disregarded that report in making their last call of 5s., and who contrast the riches (in the language of the board) once promised, and the expenditure of the company's money on the one hand, with the board's actual performances on the other, will try and save this good mine from the evils of apathetic management.

Before January is over the annual meeting will be held, and the shareholders will have an opportunity of giving effect to their opinions. The public estimate of this property can be shown by the price of the shares. Here we have the public opinion of our management. Better far for us to pay one London manager well than to divide the same sum among several who might almost be said to be playing at being directors.

DISSENTED HOLDER.

SENTEIN MINING COMPANY.

SIR,—As the paragraphs which have appeared in the *Journal* of Nov. 20 and 27 and Dec. 4, alluding to the affairs of this company, are calculated to mislead the shareholders and the public I shall be obliged if you will allow me space to correct the statements made. On the first date it was confidently asserted that a dividend at the rate of 10 per cent. per annum was about to be paid, and that another dividend at the rate of 15 per cent. per annum would be declared at an early date; but as no official of the company has given such information the paragraphs must have been the result of the writer's imagination. In the next week's *Journal* another statement appeared which put forward, among other inaccuracies, the one that the company have returned 225 tons of lead ore and 600 tons of blende during the last month, which was a palpable error, as a reference to the published mine reports and sales of ores would show; but the writer of these paragraphs was clearly actuated by other than truthful motives. As these representations appeared in a paragraph in which the correspondent foolishly used the editorial style you kindly promised to insert a correcting paragraph; but in doing so you have said that transfers have been registered as low as 15s. per share, which is not a fact; indeed, as yet no transfer of a sale of shares has ever been registered with a less consideration money than 22s. 6d. per share, and all those registered within the last three months have ranged from that price to 30s. per share, during which period only about 2000 shares have changed hands, at an average price of 25s. 4d. per share. I regret that there should have been any misunderstanding, as I made no reference to the price of shares as indicated by the transfers; on the contrary, in reply to your question if I could give you a price for quotation weekly in the last page of the *Journal*, I replied that I was unable to do so, there being no official quotation, as the sales were mostly, so far as I knew, matters of private negotiation. It will perhaps be expected that I should remark upon the paragraph referring to a dividend, which was obviously sent to you, as observed last week, with some suspicious share jobbing transaction in view. In a very short time after the close of this month the directors will be in a position to place in the hands of the shareholders the annual report and accounts, and until these have been properly prepared it is impossible to state accurately what the result of the year's working will be, since the necessary valuations of ores on hand, and of stock at the mines and dressing floors, have not yet been made.

Great Winchester-street, Dec. 6.

J. R. COOMBS, Secretary.

SENTEIN MINING COMPANY.

SIR,—Although not yet a shareholder in Sentein, I rejoice to notice the honourable and straightforward manner in which the secretary of the company (no doubt with the authority of the directors) gives denial to the seemingly authoritative paragraph which appeared in the *Mining Journal* of Nov. 27. This manly line of conduct must give to the shareholders largely increased confidence in their directors, and ultimately increase the value of the property. There is no doubt but the public are held aloof from mining, from the want of confidence in the directors and management of a large bulk of mining enterprise, who, unlike the directors of Sentein, remain dormant while the shares of the mines they are paid to protect are made use of to defraud alike the shareholders and the investing public.

Would that the management of all *bona fide* mines followed the praiseworthy example set them, and at once place the dealing in mine shares in the reliable position of other classes of investment. And, Sir, could not you do a little to remove doubt and protect the public by placing such puffs as the one exposed—say, as advertisements or in the market notes, and advise of the broker who sends them? All would then be in a position to value the statement, and not take it as your independent report. Puffing up is not the only trick of the unprincipled dealer no doubt, but without doubt the party who now attempts to give a fictitious value will after a time try to lower the value by equally untruthful means, particularly should the mine be possessed of inherent value, and likely to make a name for itself. As a case in point, I bought some shares in East Chiverton at a fair market price; a few weeks ago I was favoured weekly with a list from the dealer, quoting amongst others East Chiverton at 5s. Knowing there are only 4000 shares, and that 1000*l.* only represented a fraction of even the plant on the mine, I got a friend in another town to write for a few shares, when the same dealer wanted from him 35s. a share. Comment is needless, but this kind of thing wants stopping. Why do not directors and secretaries who are paid to protect our interests put a stop to this sort of work, and see that the prices quoted for the shares of their companies more truly represent the true market value; the investing public would then have more confidence, and soon be attracted by the advantages offered by British mining.

X. L.

SENTEIN MINING COMPANY.

SIR,—I am glad to see some notice of this great mine at last in your valuable paper. It has some remarkable advantages, which very materially reduce the cost of working it. No shafts are sunk, no engines are needed to pump out water, therefore no coal is required. These are great facts, which everyone interested in mining matters will at once appreciate. It is clear that they enormously enhance the value of the mine. The returns are at present made from three levels driven into the mountain, and hitherto have been good silver-lead and blende. For the last few months these have been very considerable, being about three-quarters blende and one-quarter first-rate silver-lead, with a total per month of upwards of 400 tons.

Enormous expense has been incurred in the erection of a substantial wire tramway nearly three miles long, to carry the ore from the mines to the dressing floors, and in the erection of very large dressing floors to treat great quantities of ore. From your valuable paper of last week I learn that these floors have at last been all completed, at the heavy cost of over 7000*l.* With part of the dressing machinery at work, the returns have been latterly about what I state; and it is believed that unless stopped by weather they may now be nearly, if not quite, doubled. The wire tramway has been at work since about the middle of May, and carried down upwards of 60 tons of ore each working day, or about 1400 tons a month; and it is said that this rate of carrying ore can be much increased during the summer months.

Very large quantities of ore are lying broken in the mine and at the floors, and it is confidently anticipated that even if work at the mine and carrying on the tramway be partially or even wholly suspended for the three winter months owing to snow and frost, the stock of ore broken will suffice to keep the dressing machinery at work; and during this time, of course, the mine costs will be greatly reduced. But it is the produce of this mine which makes it so splendid a property. This consists of silver-lead, blende, and carbonate of lead. Some five or six months ago a great discovery of carbonate of lead was made in one of the levels, and it appears from the report

that its existence in that level at points nearly 100 fms. apart has been proved.

A SHAREHOLDER.

THE FUTURE OF COAL MINING IN YORKSHIRE, DERBYSHIRE, AND NOTTINGHAMSHIRE.

SIR.—It might be imputed to me impolitic were I, as promoter of the most important practical movement in favour of coal mining, coal owners, and miners that have ever been submitted to public support, to accuse the former of having, for a lengthened period, recklessly squandered away the gifts of a bounteous Providence in exhausting and disposing of their output at a heavy loss to themselves, and consequent reduction of the latter's wages to starvation point, the sport of a few weeks infinitesimal rise in the price at the pit's mouth in mid-winter notwithstanding. The aggregate aforesaid coal trade to London, which market alone absorbs 10,000,000 tons annually, has virtually been carried on for the exclusive benefit of the railways, and the originator of the King's Cross Terminus bays, because, as a rule, the lessors levy their royalty by the acre, whether a unit or 1000 tons and upwards are daily brought to bank, whilst according to the data circulated from the highest possible source household coal has been regularly delivering to metropolitan coal merchants from the Tyne by screw colliers at as low as and under 2s. 10d. a ton, Yorkshire coal has been mulcted with 8s. 1d. by rail, or close upon threefold the carriage by sea.

My correspondence in the Journal of Nov. 20, desirous as I am to eschew a prolix recapitulation, shows my system ensures an immense saving as compared with rail or Tyne transit, and attendant expenses in each case from pit's mouth to consumers' premises in London, resulting in the monopoly of that as well as of the Paris supply. Is it possible to imagine that thousands of miners with their families are to be consigned to a perpetual state of starvation, or in the words of a leading metropolitan Conservative daily paper, "to have to work for wages so low that they can hardly eke out an existence," because, forsooth, the lessees of the invaluable coal deposits are unable to avail themselves of the means placed at their disposal to monopolise pre-empted markets to the incalculable advantage of themselves and depending pitmen. The only reasonable conclusion without imputing obduracy is that the coal owners have fallen into a thoroughly disorganised state of hopeless despondency and marked insensibility, accompanied with perfect incapacity to extricate themselves out of their embroiled condition. The Northern coal owners complain of making nothing even at the extreme low rate of sea transport, driving railway borne coal out of the market, as shown by the Coal Exchange Returns. What must be the deplorable state of the inland coal trade? Coalowners have invested capital in property which must at almost any sacrifice be kept going. If a colliery stands idle, even for a comparatively short period, the probability is that more loss will be sustained (owing to the workings and machinery getting out of order) than by running the pits even at the unremunerative prices obtained for the produce. Of the two evils, therefore, the coal owners must choose the least, and a very miserable choice it must be. The railway traffic from Durham and Northumberland is virtually extinguished (gas coal to the King's Cross Gasworks excepted) owing to the high rate of carriage charged by the different railway companies, and screw collier transport has been resorted to successfully, as stated in my letter in the Journal of Nov. 20. The Yorkshire coal owners, with their eyes open to the success attending the withdrawal by the Northern coal owners of their coal transport, &c., from the railways to the sea route, the official returns of the Coal Exchange showing the immense decrease of rail-borne coal to London, remain in a state of profound lithargy, one of the most extensive coal owners writing to me—"Our output last year (1879) averaged over 8000 tons per week, but our sales in London were practically nil, and we the nearest South Yorkshire colliery to London."

Now, these parties, with access as well by rail as by water to the seaboard, make known their inability to contribute to the London supply. What must be the produce of the South Yorkshire collieries 17 miles further distant from London, as revealed in a case before the Railway Commissioners, and later before the Lord Chancellor in the Court of Appeal this month by the coal owners in question.

Now, in perfect harmony with what is now being enacted in Ireland, where it is held that with respect to waste lands interference is justifiable upon the ground that no men have a right to the injury of the community to keep wealth-producing land unused. I maintain that the miners are kept in a perpetual state of the direst misery, infinitely worse than that of the Siberian political convict by reason of the existing administration on the part of the lessees. I entreat bankers who may have comparatively immense amounts outstanding against coal owners to call in their advances, on mortgage or open accounts, and so assist bringing matters to a crisis. I have for upwards of two years contributed exhaustive articles on the Yorkshire coal traffic without any of my statements being impugned. On the contrary, my system has been declared by the leading technical periodicals to be perfectly feasible, and the rescue of the Yorkshire coal trade. I have visited on several distinct occasions the inland colliery owners, to afford them the most ample opportunity of investigating my calculations and data, and in not one instance has any one of them challenged the accuracy of my outcome. With unflinching faith and unswerving courage I proclaim to the miners of Yorkshire that their case will meet with public sympathy analogous with that of the Irish, and with as concentrated a purpose. I am confident of achieving their enfranchisement from the abyss of misery in which they are engulfed with no prospect of release. Although perfectly independent of either coal owners or railway boards, I stand or fall upon the merits of my proposal, which to an immense extent will benefit them simultaneously with the miners. The Colliery Guardian on March 12, in an editorial article on "The Coal Traffic by Railway to London," states—"With the carrying out of this undertaking the London coal trade will be revolutionised, and the North Country traffic by sea extinguished for the benefit of the Midland or inland districts."—*Ranegate, Dec. 6.* W. J. THOMPSON.

HEAVES AND FAULTS.

SIR.—My attention has been called to the enquiry under the above heading, in last week's Journal, and I beg to submit for the perusal of "Gold not Gilt," and for the guidance of the agent to whom he refers, the rules bearing upon the heave in question. In my paper "On Heaves and Faults," published in the "Report of the Miners' Association of Cornwall and Devon, 1879," and also as an "Appendix to the Report of the Royal Cornwall Polytechnic Society, 1879," I have discussed at some length the phenomena of heaves and faults, and would refer "Gold not Gilt" thereto for information and diagrams, as from that paper the following rules are quoted:—"The heave figured is by a vein at, or approaching, right angles; such a heave as miners term 'a cross-course heave.' 'When a lode is heaved by a cross-course the continuation will be found on the right hand side,' and in this case, on approaching the fault, *b*, through the level, *a*, *c*, *d*, and the right hand, and, therefore, the continuation of the lode, is north. This rule is based upon the majority of observed heaves, and has no better foundation, while the following are to be reasoned upon, and are as nearly as possible infallible:—Prof. W. W. Smyth, F.R.S., says—'Where the lode is cut by a cross-course draw a perpendicular; on whichever side of the line of intersection the perpendicular lies on that side search for the lode.' This rule is based upon mathematical principles, and is further explained by diagrams in my paper before referred to. In this case the perpendicular lies to the north of the line of intersection, and the lode will be found north. The next rule is based upon the observed relative position of the walls of faults—'Consider the hanging-wall of the fault to have descended relatively to the footwall, then calculate the direction of the heave which must have been produced by such descent.' The application of this rule, which applies to all heaves, shows the continuation of the lode to be north."

Not only do the three rules which apply indicate the north, but the diagram itself furnishes an indication more valuable than any rule—"At the time of the fracture and formation of the fault the rocks were most probably not in the hard and rigid state we now find them. The sliding of the hanging-wall" . . . "bent the strata on either side, including the vein within; the rock, in fact, yielded to the pressure in the direction of the sliding, and we consequently find the

heaved vein when nearing the fault inclines towards the heave." It inclines north, and to the north the agent must drive to regain his lost lode. The agent is, I presume, sufficiently a miner to know in what sense I here use the word north, and also the usual course adopted to reach the continuation of the lode.

Cobourg-street, Plymouth, Dec. 4.

ALFRED T. DAVIES.

SLIDES, HEAVES, OR THROWS.

SIR.—Allow me to express my thanks to your correspondents, "B." and Mr. Jefferson, for the kind manner in which they have endeavoured to direct me where to find the lost lode. Both seem to agree that it is a right-hand throw or heave, and Mr. Jefferson explains his ideas admirably, and in a manner to be easily understood. I must also thank him for the kind offer to forward me the bearing for the exploratory rising drift, *x* to *y*. In the Cornish system of mining a rising drift, as he proposes, would be somewhat inconvenient, therefore the driving or level would have to be continued on the longer horizontal plane—*x* to *z*, the surface being nearly level, and there being no means of measuring the amount of throw either vertically or on the dip, and there being no other level at present driven up to the junction of the two lodes. I could not, therefore, give him the information he seeks; and, it not being a question of *£* s. d. in exploring, it would be unnecessary to trouble him further in that direction. Moreover, after the very able manner in which he has explained his diagrams, were such data to be obtained it would not be a very difficult matter for anyone to ascertain—at least, approximately ascertain—the distance to be driven if they knew the use of compasses, scales, &c. What is wanted is some definite idea as to whether the lode may be found to the right or left of the present end at *d*, as shown in the sketch given in the Supplement to the Journal of Nov. 27.

From Mr. Jefferson's showing, and from the knowledge I have of the theory and "rules" of heaves, it would almost seem absurd to look for it in any other direction but that given—the right; but allow me to ask, before exploring, would there be any possibility of its being a left-hand heave? and, if so, how can it be explained? Or can proof be adduced that it is not a left-hand heave? As I wish to be satisfied that I shall not have to drive a long distance in either direction without meeting the lode, and that I shall work concurrent with the ideas of those able to give an opinion on the subject.

Some weeks since some of your correspondents almost promised to write an article on this subject. Perhaps they would kindly ventilate their ideas through the medium of the Journal, and let me have their opinion as well on the subject before I start to search for this lode which is now, and will be until found, in the misty regions of uncertainty.

GOLD NOT GILT.

CORNISH AND DEVONSHIRE MINING.

SIR.—In the year 1865 there were about 310 mines in Cornwall and Devon in operation below the adit or sea-water level, and about 50 more plodding for existence above the deep adit level. There are at present in operation in the two counties an aggregate of 53 mines above and below the deep adit level. The contrast between the year 1865 and the present year is not without interest. The mining investments in 1865 were eminently successful; the facts are in this respect rather startling.

1.—The dividends that were declared in the profitable mines during 1865 were so large as to be equal to 6 per cent. on all the capital subscribed to work the 360 mines to which I have referred. This fact is surrounded with importance when it is remembered that the total called-up capital at that date was close upon 4,500,000*l*. The dividend mines only required 750,000*l*. of this capital to bring them into a profitably productive condition. The market value of the shares in these dividend mines was, in 1865, a little in excess of 2,500,000*l*. If the ratio now ruling in the purchase of mine shares were applied to that period the value would then have been close upon 3,200,000*l*. The percentage per annum which the dividends averaged on the outlay of 750,000*l*. was a trifle over 34 per cent.

An examination of the districts in which these profits were made inculcates a lesson too broad to be defined in the limits of a letter; it will be sufficient to say that many a mine unduly succumbed (in districts warranting success), while in others there never was the shadow of a hope (theoretically or geologically) that they would prove other than complete failures. It is needful in the interest of legitimate mining to observe that at least 1,000,000*l*. was expended in opening up mines, which no agent of those days—such as Capt. C. Thomas or Capt. J. Vivian—would recommend a penny to be invested in. The commercial conclusion which this involves is that mining (profitable as it was in 1865) would have been eminently more so had the 4,500,000*l*. been expended under the judgment of practical men in proper districts. In a word, the synopsis I have before me shows that mining honestly and judiciously pursued was in 1865 the most profitable investment known, and that the public (outside the county as well as in) invested their money in it knowing it to be so. The question naturally arises, in the face of the undisputed facts to which I have referred—How comes it to pass that only 53 mines are now in existence? The butcher's bill shows a slaughter of about 350 mines.

The causes in the main are well known; but as this letter is written simply to refer to the broad facts, without going into detail, it will be sufficient for the present to allude to a few. Prominently the price both of copper and tin played its part. On this head, in passing, I merely observe that the depression in tin was not solely due to the smelters, but mainly to the injudicious and gambling medium it passed through. Until a central power is established through which the foreign and Cornish tin circulates this metal on any slight increase of stock, and especially when prices are high, will be whirled about like the game of battledoor and shuttlecock by those who have successfully gambled in this direction. The smelters were to blame in exacting so wide a margin of profit; but otherwise their conduct throughout was reasonable, save in regard to the weaker firms. The late Mr. Thomas, of Devon Great Consols, was by no means satisfied with the price he obtained for his copper ore. He devised a scheme, based on a capital of 350,000*l*., to deal with this metal; but, on reflection and further enquiry of the large smelters, that course was abandoned. Mr. Peter Watson's view is the simple and the safe one, and I am assured that under his guidance a remedy for any evil in the sale of copper will be provided and successfully carried out. My object in alluding to the late Mr. Thomas is to make known what capital he thought copper smelting required. There never has been an authority worthy of greater respect than that of Mr. Thomas. Tin to be successfully dealt with requires fully 350,000*l*. in the interest of the miner. This will be laughed at, but only by those who tread on the surface of the question, and are led by the nose in the paths of folly. A sum of 500,000*l*. would be better.

The Penpoll Company is a miniature "Tom Thumb concern" unworthy of serious consideration, and, in my humble opinion, destined to be an evil to the county.

I have heard of nothing in the public declarations at mine meetings that will check gambling in tin metal, and until this is arrested the multiplication of buyers, as in the case of Penpoll, is a multiplication of the evil. No one regrets this more than I do. Tin ought to have been 100*l*. a ton for the last twelve months past, as indicated in a letter, I think, in the Cornish Telegraph some six months ago. Who kept the price down?

The next and most terrible scourge that embittered the outside public against mining was the mode of keeping the mine accounts. This subject is a serious one; it lies at the root of the abhorrence which those outside the county feel at the mention of mining. I speak for myself as one who largely contributed to the outlay in working mines in 1865, and I speak with equal certainty on behalf of others out of the county, that the loss of capital honestly spent never troubled me or them; but when certain mines were wound-up in the Stannary Court I realised that the calls made during active working to cover current costs did not cover concealed liabilities. The merchants who fostered mines by giving undue credit were, in the first place, responsible for these things, and at their door and that of the pursers the calls under A, B, C, D, &c., in the Stannary Court blanched the bones of many a heartbroken man and widow who were pestered to death by this unhallowed concealment.

I heard in the course of this year that circulars fabulous in number were issued in a certain month by certain brokers inviting parties to invest in mining without obtaining a single response. One of our provincial papers has made mine accounts the subject of its special attention. It has criticised in no measured terms the doings of West Basset, Carn Brea, Tincroft, &c., in which 95,000*l*. was from time to time concealed from the adventurers' view. To justify any concealment is impossible; but, as all connected with these concerns are amongst the most pious of Churchmen, I am one to believe that lack of moral courage rather than anything else stained for a time the reputation of the county.

Attention is now fixed on Dolcoath and Phenix, and in regard to the latter the accounts as rendered are, as named by the West Briton of this week, anything but satisfactory. The bankers' charges represent an overdraft of about 8000*l*. This mine is of some magnitude; but it is a mine that everyone who reads the comments on the accounts avoid.

May I ask your powerful aid in again pointing out that mining, however good as an investment, will never hold up its head if the public are every now and then to be startled with charges not fairly expected? Dolcoath has come in for its share of adverse comment in more ways than one; but the committee can afford to defy comments when every book is placed on the table for inspection, with accounts vouched for by two auditors.

The next point that concerns the mining public is the action of some of the lords. Up to a recent period there has been unanimity of purpose between nearly all the lords and the adventurers, save in Caradon and Dolcoath. I see a reservoir of wealth in the Camborne district if prosecuted to purpose; but I think a crevice in this reservoir has been opened in regard to dues, which will if not carefully guarded widen in the course of a year or two, and sweep away not only the mines but the inhabitants of Camborne, similar to the present deserted district of Gwennap.

I invite Mr. Waddington to write first on the Stannary Court and its utter inutility for Cornwall as for Wales—there is no one so well able; next on the mode of keeping accounts and the selling of tin.

OMNIBUS UNUS.

GUNNISLAKE (CLITTERS).

SIR.—I have been away from home, or should have replied sooner to the letters referring to this mine. I think it is a pity that Mr. Horswell did not contradict the statement as to the merchants' bills at the meeting, when it was made, as it would have been then ascertained how far it was correct; probably Mr. Horswell does not include all the bills. As regards "A Shareholder for 13 Years," he says I only want to depreciate the value of the mine; on the contrary I stated that this is a good mine, but unfortunately hitherto only carried on for the benefit of merchants and agents.

SHAREHOLDER.

LEADHILLS MINING COMPANY.

SIR.—I have noticed the letters in the *Mining Journal* about the Leadhills Mines, and have been amused at the Chairman's speeches at annual meetings. How cheerily he talks: now saying "trade looks bright;" then saying "the mine's prospects look bright," and cheerily calling upon the captain—shall I say Capt. Birnby?—for his opinion. It is very amusing; but alas! the fates are against him. Now, I know the mine, have been in it and examined it pretty thoroughly, and enquired into the company. The result was that I bought a few shares at 30*s*., thought I paid plenty, but some people raised them up; I sold out, and am now waiting until they come back again.

Well, what are the Leadhills Mines? Leadhills Mines have been going for the last 300 years, but looking back for the last 30 years there were two parties held each a portion of them. The two companies did not get on very well together, and the one bought the other out, and for about 15 or 20 years it continued to work both mines with varying success. It consisted of three or four individuals only, and it was worked with but little expense for management. They held a lease of the mines—the lordship is fair. I note parties "havering" about a reduction of lordship. They will get no reduction. The landlord could let it at the same price to-morrow, but I believe the conditions as to the proportion of men who must be exploring to those working lead ore are very stringent. Well, four or five years ago the individuals who held the lease sold it to a syndicate for a small sum, and they sold it to the present company for a large sum—a far too large sum; and I should like to know how the 15,000*l*. of profits were made up. Now, you can easily understand that the individuals who held the lease were not going to sell the mine for nothing, and though they got a small sum they got what it was worth to them, and what it was really worth. The new company are not putting out more lead, if as much, and I believe they cannot put out more. The works employ about 100 men all told. They are putting out as much stuff as ever they can get, and it is nonsense talking of the manager desiring large reserves. You will observe, then, all that the company holds is a lease of the mines for a few years, and at the end of it they might very probably not get 5000*l*. for all they have on the ground.

R. T. M.

LEADHILLS MINING COMPANY.

SIR.—Will you allow me to express my gratitude, as well as that of several shareholders in the North, for the facilities you accord to us for ventilating our opinions. The inconvenience of attending meetings in London is so great that our interests would often suffer if we were denied the medium of your generous assistance. From the letters of Mr. F. F. Wilson and "A Holder" it now appears that the false allegation as to the 30 per cent. profit was either a clerical error or a printer's slip. If this be true it would have beseeched those gentlemen better had they on the following Saturday corrected it, and not pretended to lecture me for pointing it out. Clearly no thanks are due to their spontaneity that the deception was exposed. I will at once acknowledge my inaccuracy in regard to the age of the mine, and will neither advance the clerical nor the contextual plea as an excuse for my blunder. Thanks to Mr. Wilson, we now have something like an official statement that the company is well into the fifth year of its existence, and that the shareholders have up to now not received as much as 3 per cent. on their investment. To this let me add that in exchange for this bagatelle the shareholders are to-day suffering a depreciation of close on 60 per cent. in their shares, or in other words a dead loss in paid-up capital of 70,000*l*. in the short space of four years and two months.

Mr. Wilson fails to see what my reference to the manager's profession is intended to prove. It is intended to prove, and does prove, exactly what it states. The two or three concluding sentences in Mr. Wilson's letter contain such astonishing admissions that I think the Leadhills shareholders will surely waken up. He states "I fall in the price of shares has been chiefly owing to the drop in the price of lead;" but if this argument is worth anything, how is it that other good lead mines are not equally affected? How comes it that Great Laxey, for instance, which is equally affected with Leadhills by the price of lead, is quoted at nearly 400 per cent. premium, and pays handsome dividends, while our shares are at 60 per cent. discount, and have paid us not one penny for years? The only answer to this is that Great Laxey seems to be partially worked in the interests of its proprietors, while Leadhills is worked for the exclusive benefit of its servants. Mr. Wilson asserts that the output is "unnecessarily" restricted owing to objections by the managers.

Of course they will object to any line of action which will impede their bringing into the market competitive schemes. Only within the last few weeks a huge concern has been extended, consolidated, and launched upon the market in competition with us, and our head manager was a prominent figure in that transaction. I hold the policy of restricted outputs and storing produce to be the most fatal possible to Leadhills shareholders, and the apathy which we have hitherto shown to our interests is astounding. "A Holder" states, "of course the low price of lead is an inducement to restrict our output, especially as we have a large stock of pig-lead on hand." A more fallacious argument I do not recollect to have ever seen put forward. It ignores the universal axiom in trade that increased production by cheapening prices multiplies buyers, and consequent con-

sumption, and it proceeds upon the hypothesis (rather a curious one in this era of promoters' carnival) that no competing companies will be formed pending our abstention from the market, and that when general trade gets back again into full swing, which we are doing our very best to prevent, we shall find no greater number of rivals than we had before we fell asleep.

Dec. 6.

NEW MINES VERSUS OLD MINES.

SIR.—Whilst speculators and investors in gold mines are tossed about on the shoulders of the many, and led away by florid statements which appear one day only to be contradicted the next, I think in the recent excitement several new adventures have been pushed unduly ahead, whilst many El Dorados on which a large amount of money have been unduly depressed, the former having all their work before them, and the latter are just now seeing daylight through their many years of dark workings. The mines are all in their infancy, ground being hardly broken. A correspondent the other day stated the surface gold had been worked out long ago. Contrast this with such an old and well tried mine as the Exchequer, a mine with a future equal to the Great Comstock; in fact, I am informed that Prof. Raymond, the United States Commissioner of Mining Statistics, referring to the geological structure of the district, says the "dykes are not dissimilar to the outcrops of immense veins like the Comstock, and in this way the impression seems to have been created that they are actually the continuation of the Comstock lode." Some two or three years ago the foreman and men working the claim were so impressed with the value of the property they were exploring that they offered to take their wages in shares and abide by the result. Soon after head winds set in, and the work proving much longer and more laborious than anticipated the manager could see no other way of reaching the ore but by tunneling; this is now all but complete. The 14 fully-paid shares at that time were quoted 27. to 37. The last year or two they were to be bought for us many shillings.

Bold capitalists will have during the next few months a fine field for their daring in such ventures as Perus, Turks, &c., which will fluctuate much. The Argentine market also promises to be pretty lively. Those who desire excitement, and are prepared to risk heavy losses for the sake of uncertain gains, will search long before they find a field more suited to their tastes than the above; but for an investment, or rather for a lock-up for a short time, I know of none likely to yield such results as a purchase of a few Exchequer mining shares. Let some of your readers try, they will not regret the result.

Dec. 8.

EDW. S. FRANKLYN.

WHEAL GRENVILLE AND SOUTH FRANCES.

SIR.—The secret of Mr. W. Nance's long communication on the extraordinary merits of Wheal Grenville is beautifully illustrated in the last sentence of his own letter in last week's Journal, in which we read that "we and a great many of our friends who reside in the neighbourhood of the mine have just gone into this mine." It is candid to own this, though quite unnecessary, the "puff" being sufficiently apparent without this acknowledgement. It is very probable Wheal Grenville may be opening up into a paying condition (though its past history has not been marked by any great success, having, we believe, seldom paid any dividends at all), but why run down a neighbouring mine, and try and depreciate the property? We do not like this spirit. Mr. Nance believes Wheal Grenville to be on the high road to prosperity, and the shares likely to see 25s. each, and large dividends paid. Very good; let him buy all the shares he can, and hold them, and we wish him well in his investment, but it is not good taste to single out another mine alongside and say everything disparaging of that. As far as past history goes, South Frances bears off the palm triumphantly, having paid in dividends 40s. 6d. per share, or 180,000l., whilst its rich neighbour has paid almost nil. South Frances has called up 7l. 12s. 4d. per share, or 34,575l., and Wheal Grenville 15l., or 90,000l. After a mine has expended the latter amount in "development" and "efficient machinery" it would seem high time some return was given to the deserving shareholders, and we trust they may be amply rewarded for their patience and pluck. Mr. Nance also appears wroth because the shares of Wheal Grenville are no higher than the other mine, but he is in error. Wheal Grenville are at 11l. per share, 6000 shares, is selling for 66,000l., and South Frances are at 11l. per share, 4500 shares, for 49,500l., a difference of 16,500l. in favour of the former. I leave your readers to judge as to which is the cheapest; our own opinion is, however, that the latter is entitled at least to as high a market value as the former. It is true that South Frances has suspended dividends temporarily, but the mine still continues rich, and the tin is there, whilst a little patience only is required for the necessary improvements to be completed, and the water successfully coped with, and then immense profits may be looked for with certainty. There is an old proverb which we shall all be the better for remembering, especially in speaking of our neighbours, "Live and let live."

Dec. 8.

H. C. S.

IAOY BERTHA MINE.

SIR.—I was much pleased to read in last week's Journal an account of the re-starting of this fine old mine. I say unhesitatingly that there is not another such mine in the two counties, taking into consideration its mineral wealth and great water power. I know capabilities of the mine well, and the excellent speech of the Chairman (Mr. Sharpe) did not say a word too much in its praise. The mine, even in the recent depression in the district, should never have stopped working, as those who are acquainted with the circumstances well know. At no expense for steam-power it could have paid its expenses from mundic alone. I think with all due deference to the Chairman, he touched too lightly on this point.

London, Dec. 9.

W. C.

TIN MINING IN ST. BLAZEY.

SIR.—It would appear from the letter in last week's Journal that "Fish, Tin, and Copper" has again been on a tour in this district, and I am proud to know that he and the very numerous public who visit the New Eliza Mine are so well pleased with the important discovery. Since my letter of Nov. 27 the mine has improved daily, and the men have cut three lodes in costeaning—one 1½ ft. wide, one 2 ft., and one 3 ft., each producing tin, and have a kindly character. The miners are stopping away the lode on the great discovery, and are progressing very satisfactorily, whilst the work is quite as rich for tin as it has been, and no signs of the south wall. A great quantity of tinstuff is being broken daily preparatory for the stamps. Allusion has already been made to the Rashleigh Tin and Copper Mine. I understand a company is being formed to work this property, which will also share in the valuable discovery at New Eliza, and I trust soon to see the Rashleigh taking its stand in the Dividend Paying List. The work done on the back of the numerous lodes, as well as the large coffins of workings, show that mountains of tin have been taken away. I need make no comment on this, as it speaks for itself, but would only add that not a better piece of mining ground can be found in the county, and the shareholders in this will reap a golden harvest. I would also confirm the observations which "Fish, Tin, and Copper" has made on the South Prideaux Wood Mine. A grant has been made for this, and I am informed a prospectus will soon appear in the Journal on this property. I would suggest for intending speculators to go over this sett and make observations for themselves. This property will share in the prize of the New Eliza lode. The improvement is great on a monster champion lode 10 ft. wide, producing tin all through between the surface and adit level. When this mine was suspended the company had then opened before them tin ground enough to last for 50 years. It was not stopped for want of mineral but for want of money. The extensiveness of the workings by the ancient miners is equal to that in the Rashleigh Mine, a great part of the surface having been worked over. A small amount of capital will soon bring this mine into the Dividend List. I cannot overlook the East Eliza Mine, which will to all appearances soon commence to work. This property is on the run and parallel lodes as in the New Eliza, South Prideaux Wood, and Rashleigh Tin Mines. The lodes of the old and well-known Fowey Consols Mine are running into this end, and the strata are highly mineralised.

I might also call the attention of mining capitalists to other progressive old mines in this district, especially to two—Wheal Kendall and Sowle's old mine—in the lands of Mr. Nicholas Kendall and Sir Charles B. Greaves Sowle, Bart., respectively. By pumping the water out of these mines tin and copper ores can be raised in large quantities, and will at once pay the working costs. Both the mines last mentioned are possessed of new virgin ground, into which the old lodes are running. The lords will liberally assist in bringing out these mines, and the day is not far distant when we shall have as good mines here as there were 40 or 50 years since. Let capitalists bring the money to develop the properties, and we will get the tin, copper, and other minerals to repay their outlay.

St. Blazey, Cornwall, Dec. 7.

P. RICH.

WEST CHIVERTON MINE.

SIR.—Undoubtedly many of the shareholders in the above mine who read "Observer's" letter in last week's Journal feel grateful for his communication. He "holds a considerable number of shares, and is deeply interested;" moreover he seems well acquainted with the principal points in the mine, and yet he makes no attempt to refute the statements made in my last—first, that the eastern part of the sett has been already explored by the driveage of several levels, sinking winzes, and driving cross-cuts in it, consequently cannot be "unexplored ground" in a general mining sense, as Capt. Southey stated in his report; second, that the junction of the east and west and north and south lodes, to which Capt. Southey attached so much importance, has been proved at the 20 and 50 fm. levels, and which I do hereby most emphatically repeat. The most theoretical miner will see that these are not questions of opinion, but matters which an underground inspection, or an examination of the plans of the mine—supposing they are correct—would at once decide, and yet neither "Observer" nor Capt. Southey attempts to refute what I have said. Very significant indeed. "Silence gives consent," hence the shareholders are indebted to "Observer" for his able letter, and I can freely forgive him for his feeble attempt to bring contempt on my devoted head (in the former part of his epistle) and the side wind—though it is very false—which he infuses at the close.

Seeing "Observer" has done his co-shareholders such good service, with your permission, Sir, and for his further benefit, I may when I have a little spare time shed a few rays of simple truth on another of the important points in this mine—the 70 cross-cut—as I am

ONE DEEPLY INTERESTED.

CAMBRIAN MINING COMPANY.

SIR.—I have merely to repeat that figures given in my last letter were correct, and I never supplied the erroneous statistics your correspondent quotes.

GEO. H. KEENE, Managing Director.

WEST GODOLPHIN MINE.

SIR.—In a letter inserted in last week's Journal Mr. Robert Wilson writes that the Chairman of the meeting of shareholders, held on Nov. 13, said I had inspected the West Godolphin Mine. I have read the Chairman's speech as reported by you, and I cannot see that he stated anything of the sort, and I would ask you and the public to consider that Mr. Wilson may have been just as inaccurate in his other representations as he has, unfortunately for his own credit, been in this one. I did not advise Mr. Gould or any of my friends to join in reworking the mine upon the strength of any underground inspection made by myself, but upon my own knowledge of the district and of the lodes running through this sett, and upon the most reliable information given by others as well acquainted with it, better authorities than Mr. Wilson, and upon the evidence of men who worked in the mine; and I do not hesitate to say that in a less time than Mr. Wilson dreams of I believe I shall have the pleasure of proving to him, and what is of far more consequence, to the adventurers, that I have been fully justified in saying what I now repeat, that in West Godolphin we have one of the best mining properties in the West of Cornwall.

In conclusion, let me say I was a shareholder in the old company to the last. And now let me ask Mr. Wilson, as Chairman then, and as one of the liquidators since, how it is that I at all events have never received a copy of any later statement than the one upon which the Chairman very fairly commented? The answer must be—there never was one published; and if this be so, it is quite apparent who is making an attempt to mislead.

Wheal Grenville, Camborne, Dec. 6.

T. HODGE.

WEST GODOLPHIN MINE.

SIR.—In last week's Journal I offered to return to any of the subscribers for shares in this mine their amounts in full, should they feel disposed to retire from the concern, after the appearance of Mr. Robert Wilson's threatened explanation. I now beg to inform you that no shareholder has accepted my offer. This is a tolerably clear proof that no one has been deceived by the representations made on introducing the concern, and the inference is plain that Mr. Wilson's revelations have only exposed his own want of judgment and courage in abandoning what I believe will very shortly prove to be a very valuable property.

Threadneedle-street, Dec. 10.

F. G. LANE.

WEST GODOLPHIN MINE.

SIR.—"Those who live in glass houses should not throw stones" is an adage which I may safely commend to the consideration of the writer of the letter in your last issue signed "Robert Wilson." The man who attempts to impugn the accuracy of another's statement should be scrupulously careful as to the correctness of his own. In the very first paragraph of his letter having reference to my statements he is so grossly inaccurate that I am really inclined to think, and the public will, I am sure, think so too, that he can hardly have read the very statement which he is so anxious to contradict. He says—"In addressing the meeting on the 13th Mr. Gould, the Chairman, said—'With regard to the value of the property underground it is almost impossible to get any direct evidence. I have depended mainly on the evidence of Capt. Thomas Hodge. When he first surveyed the mine under all kinds of difficulties he gave his opinion about it.' He then tries to throw discredit upon me by saying he is not aware that Capt. Hodge ever inspected West Godolphin Mine."

I never said he did, and Mr. Robert Wilson, if he read your report of my speech with any degree of attention, knows that I did not say so. With what object, then, does he so misrepresent me? Permit me to quote here what I did say, and so fairly reported by the *Mining Journal* and another that it is impossible to make any mistake about the matter.

"With regard to the value of the property underground it is almost impossible to get any direct evidence. I have depended mainly upon the evidence of Captain Thomas Hodge, who has been a very valued servant in Wheal Grenville for the last five years, and whose judgment we have never been able to impugn. When he first surveyed the mine (the word 'the' being more correctly rendered 'that' in another report), under all kinds of difficulties, he gave his opinion about it, and I am bound to say that we have progressed in such a satisfactory manner there as to justify to the fullest extent everything which Captain Hodge led us to expect."

I can only express my astonishment that anyone should have perverted the plain and obvious meaning of this passage in the disingenuous manner Mr. Wilson has done and charged me with inaccuracy thereupon; it will be seen to be the more inexcusable and ungentlemanly when it is noticed how he wilfully garbles my statement, leaving out in his quotation from my speech every word attaching the report I referred to to Wheal Grenville and not to West Godolphin. I am not disposed to enter into a newspaper controversy with any man who is capable of such misrepresentation as this, or who in argument could descend to mere trickery, as this undoubtedly is. Nor indeed do I consider your Journal is exactly the place to bandy backwards and forwards any differences between Mr. Wilson and myself. My statement and my letter, together with Mr. Wilson's, are before the public, and with this exposition of his thorough and unjustifiable inaccuracy I am content to leave the matter to their judgment. I

shall be at the next general meeting of the adventurers, and I invite Mr. Robert Wilson to meet me there. If he will I will undertake to justify every word I have said or written with regard to West Godolphin Mine.—London, Dec. 6.

R. W. GOULD.

FORTESCUE (STANNAGWYN) NATIVE TIN AND COPPER MINE.

SIR.—It is very seldom that any mention is made of the above mine in the columns of the Journal, and my object in now writing about it is to elude if possible information as to its present position and prospects for the benefit of myself and those whom it may concern. So far as one is able to judge from the reports, which include one of Dec. 3, by Capt. Trethewey, of Tin Hill Mine, it is likely to prove a prize to all who may have the good fortune to hold shares in it, as the supplies of ore are stated to be practically inexhaustible, and the returns so large that the shares held in reserve have been issued at par to the shareholders in order that an additional 48 heads of stamps may be erected for their treatment.

I understand there was another Fortescue Mine that went to the bad whose affairs are being wound up, and I should like to know whether the Fortescue var. St. Stephens, quoted in the Share List of the Journal, and Fortescue (Stannagwyn) are one and the same, or whether the former is really the old mine, in which case the shares of the latter are not quoted. I should be obliged if someone who may know more of the matter than I do would give myself and others the benefit of his superior knowledge in another week's issue, as if all the good things spoken of in the mine are true it is only fair that they should be more generally known.

ONE INTERESTED.

[For remainder of Original Correspondence see this day's Journal.]

REPORT FROM CORNWALL.

Dec. 9.—Nothing that is likely to happen between this and the end of the year will weaken the well-grounded faith felt by most mining people "down West" in the encouraging prospects of the immediate future. Confidence is now so far restored that it is not to be shaken by any possible amount of speculative operation, and a little dullness is now in all probability the worst that we shall have to submit to. A few days since we thought it very probable that there would be a substantial advance in the tin standards—and, as a consequence, in tin stock generally—before the close of the year. The prospects of such a recovery are not so apparent now, because we are rapidly passing through the only time—that anterior to the Christmas holidays—that could have given it to us, and in another week, if no change takes place in the interim, it will be hopeless to look for any important revival of business before the New Year. Nevertheless, we are sanguine that December in the matter of dividends and of general business will be a very creditable month to wind up the year with, and a capital starting point for 1881. We believe that at the present moment the proportion of mines that are working at a profit—large or small, as the case may be—is far greater than at any period since the depression set in, and that, moreover, there never was a time when so many hopeful ventures were being launched. It must be borne in mind that the conditions of mining have changed so materially that the balance of probabilities, with the exercise of ordinary care, is far more upon the side of an adventurer in new concerns now than it could under any circumstances have been ere necessity had taught us more efficient ways and stricter economy.

Of current events of the week the most important has been the holding of the Annual Exhibition of the Mining Institute of Truro, under the presidency of Capt. Josiah Thomas. The exhibition, as will be seen by the detailed report in another column, was one of considerable interest, and of no little practical importance, several novelties and many improvements being brought under notice. No one can doubt that the Institute is doing most useful work, and doing it, too, in a most practical fashion. Whether it is possible more directly to systematise the efforts made is a point upon which we are very doubtful—in the long run here, as in aught else, demand and supply will do all that is needful.

What we do doubt, however, is the advantage in the present stage of the particular question of machine boring of what are called—by courtesy rather than in fact—"trials" of rock-borers. Undoubtedly to the general public there is some interest in them, but to practical men they can have no value. Everybody knows now that machine boring is an accomplished fact, and everybody knows, too, that the only tests worth anything are those of actual everyday work. Is it not possible to go a step further, and compile a body of statistics with regard to the actual working of the drills that have been introduced into the county, their cost, speed, fitness for different kinds of ground, the character of the plant required to drive them, and other points of like character, which will at once commend themselves to any practical man? Such a work as that, if taken up by an independent competent hand, would be of the highest utility, though it must be confessed also it would be one of no little labour and difficulty. However, as we all know, *finis coronat opus*, and meanwhile let us hope that no more importance will be attached to the ordinary trials than they deserve. They did well enough, and had a useful purpose in the infancy of mechanical boring, but we really have outgrown them now.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Dec. 9.—There has been no change to note with respect to the work being done at the lead mines in the Peak and other districts in Derbyshire, which appears to go on in a quiet and orderly manner. The output of ore has been kept up to the average, the great mass being to the credit of four or five mines. There are, however, many being worked that just keep the miners—who may be said to be the owners—sufficiently employed to earn about ordinary miners' wages. The iron trade has kept up fairly, although the demand for ordinary pig is not quite so brisk as it has been, whilst quotations are also lower. However, a considerable quantity has been forwarded to Staffordshire and Lancashire, in addition to the heavy consumption at the local works, such as those at Staveley, Sheepbridge, Clay Cross, Stanton, &c., where a great deal is used at the foundries. Merchant iron, it may be said, is in comparatively moderate request, so that the mills and puddling furnaces for some time past have not been fully employed. Some of the foundries, however, have been doing well, more especially in pipes, for which several of the works are noted. There is not so much being done in light and ornamental castings, but a good deal of machinery is being turned out at one or two establishments. At Driffield they are still busy in steel rails, and it is said a large order has just been taken for one of the Indian railways. Of late the coal trade of Derbyshire has been more active than during any previous part of the year, so that the collieries, as a rule, have been working full time. Business with London has been more than usually brisk, and the Clay Cross Company alone sent last month upwards of 27,000 tons within the radius of the city dues. A large tonnage was also sent from Grassmoor, Eckington, Blackwall, and several other collieries connected with the Midland Railway. Nearly all the coal sent was for household purposes, for the demand for steam coal has fallen off, excepting what is required for the local furnaces. The wages question is beginning to crop up, as the men looking at the increased business being done, and the advance in the price of some descriptions of coal, consider that there should be a rise in wages, overlooking the fact that if house coal has gone up other sorts have to be sold at less money.

In Sheffield trade continues good in nearly every branch, so that there is a large consumption of both raw iron and steel, but the production appears to be rather in excess of what is required, so that stocks in some instances are getting larger. The mills are running well on ship and boiler plates, sheets, hoops, bars, and wires. Some good orders have just been booked for steel rails for home railways, so that the makers will be busy for some time to come. Armour plates are being turned out to a moderate extent only, but the new year is likely to see a change with respect to them, and the adoption by the Admiralty of the steel-faced plates, experiments with which during the present week have given the most satisfactory results. Crucible steel is still in rather moderate request, and not so much is being done in light agricultural implements. The cutlery houses

are fairly off for work, more particularly those engaged in the best qualities of table knives. Skate makers are still active in anticipation of the demand that is likely to arise, and purchasers have cleared off stocks quickly. File makers have been doing a steady business, as have those engaged in some of the light and old staple trades peculiar to the town.

In South Yorkshire the house coal trade has been good, but "hards" are not in such request as they were, and are being sold at a reduced rate. Gas coal has gone off well, and coke makers have been doing a good business, more particularly with iron smelters. The miners have had several meetings during the week, and they appear to be determined not to have anything to do with insurance, but have the Employers' Liability Act carried out as it is.

TRADE OF THE TYNE AND WEAR.

Dec. 8.—The coal and coke trades, on the whole, continue to improve. The shipments of gas coal at Tyne Dock and on the Wear have been very large during the past week; there has been an ample supply of tonnage of all kinds, and it is probable that the exports of coal and coke from the Tyne during the past fortnight will be the largest since it was opened. The opinions respecting the steam coal trade for the winter are conflicting, but some of the leading collieries are very full of orders at present, as heavy shipments are required for the East. The manufacturing coal trade continues fair; there is a good demand for small coal and also for bunker coal. The demand for house coal is rather more quiet, but most of the house coal works in Durham are fairly employed, and, as a rule, gas and coking coal works are fully employed. The South Moor Collieries, belonging to Messrs. Hedley, have nearly been brought to a stand owing to the refusal of the owners to pay the usual wages current in the trade, the rates having been settled by arbitration. Messrs. Hedley are not members of the Coalowners' Association, and they hold that they are not bound to adhere to the rates agreed upon by that body with the miners; but this is quite inconsistent on their part, as they have previously followed the same course as masters who are members of the Association when reductions have been made in wages, and there is no doubt that they are equally bound to adhere to those regulations when the men obtain an advance.

The monthly circular of Mr. Crauford, agent for the Durham Miners' Union, has been published. It appears that the accountants' return for the value of coals sold from the collieries in Durham for the last quarter shows that the average price has advanced about 5d. per ton, and this will entitle the men to an advance in their wages of 2½ per cent. Mr. Crauford will not advise the men in Durham to enter into any arrangement with the masters to effect insurance against accidents in the mines which will have the effect of contracting themselves out of the Act lately passed by the Legislature, which is expected to render the master liable for damages for a certain class of accidents.

On the Tyne and Wear the engine works continue to be well employed, and overtime is fast becoming the rule instead of the exception; the rolling mills are also doing well. The leading foundries are also well employed, and skilled workmen and mechanics generally have a good prospect for work during the winter. The iron shipbuilding trade continues very active, and this activity stimulates many other branches of trade, especially, of course, the iron and coal trades. The chemical trade on those rivers—a very important one—continues in a very depressed state; a considerable, indeed a large, business is certainly done, but prices continue very low. The reason given is that overproduction still continues, but as very little stock is held it is clear that makers are obliged to realise in order to keep their concerns going. At the commencement of the year a revival in the demand for chemicals took place, and merchants and makers were sanguine that better times had dawned, but a good deal of speculation occurred, which appears to have done much injury. At present there are better reports from Liverpool, a good demand having sprung up in America and other quarters for chemicals.

Referring to the subject of colliery explosions again, we observe that some practical men on the Wear propose to drain the gas from the lower seams by sinking staples (or small pits) from the upper seam to the lower, and making the return air course in the upper seam. This appears to be feasible, and well worthy of attention; the intake air currents would, if this were carried out, pass along the lower seam or seams, and supposing the workings were to the rise staples would be sunk at convenient points communicating with the upper seam, and the air currents would naturally carry the gas upwards and return in the air channels, and this would certainly give a fair chance of freeing the lower seam of accumulation of gas in goafs and rise workings. This proposal, it will be observed, includes the principle advocated by Mr. Plimsoll, but it is carried out in a different manner, and likely to prove of great advantage if not effectual. The pipe Mr. Plimsoll proposes to insert would certainly never do any practical service on account of its small area, while the staples and return drifts we have noticed would be of large size, and may be considered pipes for all practical purposes. This system appears to be quite adequate for drawing the gas from lower to higher seams, as small staples or bore holes could be put down at any required point, and as the return is placed in the upper seam, the air and gas would ascend upwards in all cases.

The pig-iron trade has been rather dull during the past week; the finished iron trade at Middlesbrough is exceedingly brisk. Plate makers are full of orders; one firm has orders for 30,000 tons of angles and bars. The output of plates is estimated at 1000 tons per day, and the demand exceeds the supply; it is difficult to buy for early delivery. At the Eston Steelworks 3000 tons of ingots are made per week; a portion of this is made by the new process. A large order is in hand for America for these blooms. An order has been received for 20,000 tons of steel rails for the North-Eastern Railway. The monthly returns of the Cleveland ironmasters show that there are 118 furnaces blowing at the end of November; last year there were 93 furnaces in blast, an increase of 25 furnaces. The makers' stocks during the past month have decreased 14,314 tons, but the stocks in public and private stores have increased 21,000 tons. The returns are regarded as very favourable for the makers. The quantity of pig-iron in stocks and stores at the end of December, 1879, was 212,866 tons, and at the end of November, 1880, 305,547 tons. The stocks in Cleveland are very considerably below what they were two years ago. A very strong demand for pig-iron is expected in the spring.

At Middlesbrough on Tuesday there was a good attendance; no change in quotations for iron. The increase of stocks for November in Cleveland were double what were first announced, owing to a clerical error, being 13,197 tons. Buyers wanted a reduction of 3d. per ton, consequently a dull market. Heavy shipments have of late been made to Scotland, and also to Germany. The inland trade is quiet; the steel trade continues very steady. The finished iron trade continues very satisfactory; many branches are improving. Ship-plates, 6l. 15s. to 6l. 17s. 6d.; bars, 5l. 12s. 6d. Coal and coke steady.

THE SEAHAM COLLIERY.—The men at this colliery refused to work last week, having become a little alarmed on account of the reported leakings of the dams put in to shut off the workings in the Maudlin seam, which caused the managers to put in additional dams. A meeting of engineers, miners, Union agents, and a deputation from the workmen, was held on Saturday, when the subject was fully discussed and the following resolutions were agreed to:—1. That in the opinion of this committee it would be unsafe to open out the Maudlin seam for some time to come.—2. The committee are of opinion that no danger can arise to the workings in the other seams from the fact of the Maudlin seam being shut off. It is, therefore, expected that work will be resumed this week.

THE ELECTRIC LIGHT.—We noticed a short time ago the lecture of Mr. Swan on this subject, in Newcastle, and also the result of his invention. The premises of Mr. Swan, in Mosley-street, Newcastle, have been lighted by means of this light for some time, and the Newcastle Corporation contemplates, as an experiment, lighting the Mosley-street on this system. This will test the system as to economy; it is, however, fully expected that the cost will not exceed the cost of gas, and the light itself is vastly superior to gaslight in every respect. There is no doubt that this light will ultimately come

largely into use for lighting dwelling houses, and also for factories and public buildings, and attempts will also be made to adapt it for use in lighting coal and other mines.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Dec. 9.—The demand for coal mined upon Cannock Chase is not so good as a year ago, since the mildness of the present season is operating adversely. Yet the advance of between 1s. 6d. and 1s. per ton which the owners declared a month ago is fully upheld, the more so as house fuel coming into this district from the Leicestershire and Denbyshire coal fields is also advanced in sums varying from 6d. to 1s. 6d. per ton on the various qualities. Furnace and forge coal is selling better, and present prices are rather less profitable than they were. Alike the manufactured and raw iron market showed strength to-day in Birmingham and yesterday in Wolverhampton. Black sheets were in some instances advanced 5s. a ton on the week, making singles 7l. 15s. Forward orders in this branch were numerous offered. The bar trade is without much change at 7l. 10s. for best and 5s. 15s. for common qualities. Derbyshire pigs were obtainable from some agents at 50s. easy. Tredegar hematites were strong at a rise of 2s. 6d. Native pigs were also rather firmer.

The terms of the notice which the secretary of the employers section of the Iron Trade Wages Board has received from the workmen's representative for a revision of the wages scale has about it a vagueness which has led to considerable doubt being entertained as to the real purport of it. It seems now, however, to be most likely that the operatives wish for a discontinuance of the custom which has hitherto prevailed of deducting certain extras from the prices of iron ascertained by the accountants every three months previous to the net price being declared. This, if accomplished, would mean a rise of about 1s. per ton upon the present scale. An early meeting of the board will be held to take the notice into consideration.

Messrs. Aston and Grazebrook, colliery proprietors near Dudley, have recently started their Netherton engine, the probable effect of which will be to unwater the Cabbage Hall and Old Buffey pounds, and to considerably help the Old Hill pumping-engine of the Mines Drainage Commissioners. It is anticipated that by-and-bye there will not be a water-logged pit in the whole of the district, which will mean the bringing into the market of valuable furnace coal now drowned out.

The work of sinking the 88 tubs into the No. 2 shaft of the Cannock and Huntington Colliery has now been completed. The placing of concrete between the back of the tubbing and the shaft will be proceeded with forthwith.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

A meeting of the North Wales colliers' representatives was held at the Wynnys Arms Hotel, on Saturday week, to receive the report of the actuaries relative to the price of coal in reference to the sliding scale arrangement made between masters and men with respect to wages. It was reported that the average price was 5'041s. per ton. The price thus showed no advance, and the men's wages will remain the same.

A sad accident, involving the loss of four lives, occurred at the Llay Hall Colliery, between Wrexham and Mold, on Friday morning last. The men were going down the shaft to their work, and several batches had gone down by a cage. As the last four men were descending the cage caught in something projecting from the side of the shaft, probably a bearer. This gave the cage a jerk and caused it to stop suddenly, when the four men were thrown out, and fell down the shaft a depth of 90 yards. Their bodies were much shattered. The collieries are working better, although some at which the coal is not of the first quality are not yet working full time. In reply to a Welsh correspondent Mr. Macdonald, M.P., advises the colliers not to contract themselves out of the rights which the Employers' Liability Act confers upon them. While in favour of insurance he is afraid that a "hush money fund" will paralyse vigilance in the management of the mines. Why?

The men working at the paving set quarries in South Carnarvonshire, to the number of 600, have struck work because an Englishman has been appointed as foreman. I generally sympathise with the men, but I hope that in this case the men will have to submit. If there is nothing personally objectionable in the new foreman they have no right to object on the score of his being an Englishman, especially as the quarries are worked by English capital. Apart from this, as I have said on former occasions, there wants a thorough reform in the prices paid to sett quarriesmen.

Last week was a broken one at the Carnarvonshire slate quarries. On Tuesday and Wednesday the men turned out *en masse* on election matters, and for the rest of the week some of the employers, who are not of the same politics as the men, closed their quarries. Apropos of the Carnarvonshire election a story is told of the way in which canvassers make up their books, and the Welsh get an unfair reputation for lying. A Carnarvon innkeeper went to a slate quarry not very far from that town where 38 men were working. Of the 38 two were "blue" and 36 "yellow." The canvasser says to one of the blues, "Of course, you will vote for us." "O, yes," says the man, whereupon the canvasser enters the whole 38 in his book! For myself, I believe this is a fair illustration of the way in which the Welsh have come to be labelled of late. The paragraph which has lately been going the round of the papers that the men in the Merionethshire slate quarries have been reduced from six to four days a week should be read the reverse way. The working time has been increased from four to six days a week.

Meetings of Public Companies.

COLAR GOLD MINING COMPANY.

An extraordinary general meeting of shareholders was held at the City Terminus Hotel, Cannon-street, on Thursday, Colonel LINDSAY in the chair.

Mr. S. VESEY TIDY, the secretary *pro tem.*, read the notice convening the meeting.

The CHAIRMAN said the meeting had been called together, as the shareholders had heard from the notice just read by the secretary, for the purpose of electing additional directors, it having been found rather inconvenient as the board was at present constituted, through one of their directors being obliged, in consequence of medical advice, to be absent from England during the greater part of the year. The meeting had also been called together to take the sense of the shareholders with regard to the proposed release of the company's option of purchase as regards half of the block to the south of their land. The directors had ascertained that some shareholders were under a false impression that the land recommended for sale was part of the land which the company had acquired by purchase. This was not so. It was only a portion of the block which they had the option of taking up, and that option only existed until Feb. 1, 1881. To take up this block it would be necessary for the company to raise additional capital which would be required for purchasing and working the entire half-mile, and according to the agreement the purchase price was fixed at 50,000l. The chairman then pointed out on the map the position of the property referred to, and said that the parties who wished to purchase the piece of land desired, as the circular informed them, to derive the title direct from the concessionaires, so as to avoid the retransferance of the property. The 5000l. was to be derived in this way: The concessionaires offered to the Colar Company 5000l. to release their option over this portion of the land, provisionally upon the parties who proposed to form a company for developing the property succeeding in forming the company. It was proposed that the amount should be paid on Jan. 24 next. He would be happy to reply to any questions on the objects for which the meeting had been called.

Mr. JOSEPH asked whether he was right in understanding that this would be a positive payment to the Colar Company of 5000l. from the original concessionaires, provided the company gave up their right of having conceded to them one-half of the piece of land which was described on the map as "optional?"

The CHAIRMAN said the arrangement was a provisional one. If the company which it was intended to start actually came into existence and purchased the property, the concessionaires would, out of the purchase-money, pay to this company 5000l. There was no doubt that the plot of land they actually possessed was ample for all the purposes of mining, and if they decided to apply for this optional piece of land they would have to provide the money at once; they would require fully 50,000l.

Mr. SIMPSON (solicitor) then read the heads of the provisional agreement which had been entered into by the directors, subject to the approval of the

shareholders, for the conditional giving up of their option to the piece of land referred to.

Mr. JOSEPH said he was quite confident the land they proposed to keep was quite enough for all practical purposes. (Hear, hear.) He found, however, that they also had the option of taking another piece of ground, in addition to that the option of taking which it was proposed to sell, which might or might not be desirable for them to take. He thought they should accept the 5000l. if they could get it, but he would ask what likelihood there was of the company to which reference had been made being formed?

Mr. HENDERSON asked whether or not the 75,000l. on the first issue of capital had been fully subscribed, and, with respect to the proposed sale, if it were worth while for someone else to pay an additional sum of 5000l. for it, he thought there would be no difficulty in getting the capital required subscribed by the present shareholders. It might be worth while to take up the whole of the block for which they had the option, and sell a portion of it, as had been done in the case of the Devila-Moyar Company?

The CHAIRMAN, in reply, said the more recent reports received from their property more than confirmed everything they had heard as to its value. Not one of the vendors' shares had been placed on the market. The capital had all been subscribed, but the directors were doubtful whether the capital required to purchase the additional property could be obtained within the period between the present time and Feb. 1, and seeing that the land might go away altogether, the directors had accepted this provisional agreement, subject to the confirmation of the shareholders. If they could raise the capital required at once they would only be too happy to secure the piece of property for themselves.

In reply to a question the SOLICITOR said the Memorandum of Association gave them power to vary the agreement of Aug. 10. The whole of the necessary alterations had been carried out under the advice of counsel, and with the assistance of the directors. (Hear, hear.)

General PEARSE then proposed the following resolution:—"That notwithstanding clauses 59 and 60 of the Articles of Association, Mr. William Donald Ryrie, of the Oriental Club, Hanover-square, in the county of Middlesex, who has acted as a director of the company prior to Oct. 31, 1880, but who did not signify his intention in writing to become such director in accordance with clause 60, be hereby appointed director as if he had duly signified his intention to become a director in writing signed by him, and left at the registered office of the company, in pursuance of that clause on Aug. 17, 1880, and that all acts done by him as director up to this date be and the same are hereby confirmed, and shall have the same force and validity as if he had been duly appointed on Aug. 17, 1880."—Major CHARLES BLAIR seconded the resolution, which was carried unanimously.

On the motion of General PEARSE, seconded by Capt. COTTELL, the following resolution was also carried:—"That, notwithstanding clause 59 of the Articles, George Vans Agnew, of Percy Lodge, Campden Hill, Middlesex, esquire, and Colonel James Harris, of 17, Oxford-terrace, London, W., be appointed directors of the company."

General PEARSE then proposed—"That the company approve and confirm an agreement made between the company of the first part, Adam Hay Anderson of the second part, and John Hunter Blair, Alexander William Crawford Lindsay, George de la Poer Beresford, the said Adam Hay Anderson, Leander Miller, Frederick George Shaw, James Dunning Baker Gribble, William Bell M'Taggart, James Langford Pearse, William Arbutnot, Michael Fitzgerald Lavelle, John Heron Maxwell Shaw Stewart, and William Morgan of the third part, whereby the company agree, subject to the conditions in the agreement mentioned, to release the option given to the company to take a sub-lease of mining rights over block No. 2, so far as regards one-half of that block, in consideration of a payment of 5000l. in cash."—Major ANDERSON seconded the proposition.

Some conversation, in which Major ANDERSON, Mr. HENDERSON, Mr. JOSEPH, and the solicitor took part, ensued, at the conclusion of which the proposition was carried with four dissentients.

The meeting then closed with the usual compliment to the Chairman.

PANULCILLO COPPER COMPANY.

The 17th ordinary general meeting of shareholders was held at the New Exchange Buildings, George Yard, on Tuesday.

Mr. JOHN PENDER M.P. (the Chairman), presiding.

Mr. J. ALEXANDER (the secretary) read the notice calling the meeting. The report of the directors, which has already been published, was taken as read.

The CHAIRMAN said: Gentlemen, in the first place I must apologise for the adjournment of the meeting from this day last week until to-day. I was, unfortunately, detained on the Continent, and it was not possible that I could arrive in England in time for the meeting. You may, I dare say, sympathise with me a little in my desire to be present at the meeting to-day. It is 17 years since the Panulcillo Company was formed, and we have not, during that period, paid many dividends. As we are now about to resume a dividend, with a very good prospect of its being permanent, I was naturally anxious to be present to-day, simply to give you a few words not only as to the past, but a few words of encouragement as to the future. (Hear, hear.) It is 17 years, as I have told you, since the Panulcillo Copper Company was formed, and during that time we have had a very great amount of labour and anxiety, but we were never left without hope, and with the belief that the company must eventually assume very much larger proportions than it did during that time. I think I may say we have now got into a position which warrants the directors in saying that they have carried through the concern at great personal labour and great pecuniary sacrifice, but we are proud to say without the loss of a shilling to those who made themselves personally responsible for carrying on the enterprise. (Hear, hear.) I only regret that some of those gentlemen who shared the toil and the anxiety, and who freely put their hands into their pockets to keep what they believed to be a good thing in existence—I only regret that they are not here to-day to join with me in the expression of opinion that we have weathered the storm, and that for the future we shall take, I believe, a high position amongst the dividend-paying mines of the country. In the first place, during the past 17 years we got considerably into debt. We had to develop the mines, and were, I dare say, to some degree disappointed from time to time with those whom we appointed to carry on the mines. Latterly we got into a groove of honor and honesty in that respect. All that we advised was faithfully and honestly carried out, and notwithstanding the low price of copper that is now ruling we are able to pay, through economies exercised, I hope the beginning of a most satisfactory dividend. We are now free from debt. (Cheers.) Being free from debt all our earnings must, of course, be devoted to dividend purposes. I gave you such a full description last year and the year before of the position and prospects of the mine that anyone who takes the trouble to read what I then said will see that almost everything which was then said has been verified, and we now stand before you free from debt, and in a position to pay upon the last half year a very respectable dividend. We have earned about 24,000l.—net between 25,000l. and 27,000l.—and paid off 19,000l., the last of our debts, and in future we shall stand in a position of being able to pay, if even copper maintains the same price, a dividend of 15 per cent. If copper should go up 10l. or 20l. (and we are paying upon an average price of about 61l.), and all those who know anything of copper know that is a very low price, and even 70l. would not be a high price)—if, therefore, we are able to earn 30,000l. on an average of 61l. for copper, I think the prospects in the future must be considered very good indeed. (Cheers.) We have got, it is true, 40,000l. in debentures. Those debentures were issued at 10 per cent., and I may tell you that we had debentures previous to that at a higher rate, but we feel that those who have stood by the mine in the hard times were entitled to a fair return in the way of interest upon the money they put in to carry the thing through. I myself, perhaps, put in the largest sum, and other gentlemen have also equally, perhaps, shared the responsibility. Those debentures will expire in four years, and it is our intention to pay them off. We might borrow money at a very much lower rate, but the difference will be very small, and we feel that we must be just as well as generous. Nevertheless, the debentures are virtually doomed—that is to say, they will be paid off at the proper time. (Hear, hear.) We shall then stand with a perfectly free revenue to pay upon 200,000l. worth of shares. Those who have read Mr. Welch's report will be satisfied that we have got there a very valuable property. We have large reserves, and having finished the San Gregorio tunnel have a higher level of ore than we have previously enjoyed. The deeper we get in the mine the more apparently does the ley advance. Every addition that comes in the way adds to the value of the property, and to the income arising from it. Copper, as we are aware, at the present time is lower, perhaps, than all the metals. There is no reason why copper should be at so low a price, and I believe that with improved trade we shall see copper take something like its normal position in the market, and with that normal position it must largely increase the value of the Panulcillo property. We are provided with coal and coke for about 12 months hence, and our earnings will not be subject to any deduction on account of fuel. We have before us, I hope, a year of very cheap material, prospects of improved trade, an advance in copper, and I hope when I meet you next year it will be with the certainty of an increased dividend. (Cheers.) In short, I may say, in conclusion, Panulcillo is not a mine, but a vast mountain quarry of the finest fluxes, which seems to be placed by Providence in the midst of a district surrounded by hard carbonate ores, so that Panulcillo practically holds the key of the copper production of the district, and this position seems likely to be maintained long, long after the lifetime of the youngest shareholder present. I cannot say much more about the mine than that I believe that those who live will see these things realised. (Cheers.) I have now to move that the report of the directors and the statement of accounts be and the same are hereby received and adopted, and that as recommended by the board a dividend of 2s. 6d. per share, free of income tax, be now declared and paid forthwith.

Mr. FRANCIS J. JOHNSTON (deputy chairman) seconded the motion.

Mr. THOS. MORRIS asked whether he understood from the Chairman that the debentures could be paid off in 12 months?—The CHAIRMAN: We have the power to pay them off in 12 months by giving three months' notice. They do not lapse in 12 months.

Mr. MORRIS said that no doubt 10 per cent. was a somewhat heavy charge, but gentlemen who had advanced money to the company at the time it was in difficulties were fully entitled to it, and they ought to be treated handsomely. He asked out of what fund was it proposed to pay off the debentures—out of the current profits of the mine?—The CHAIRMAN: Yes, certainly.

Mr. MORRIS asked if the shareholders would have to go without a dividend until these debentures were paid off?—The CHAIRMAN: We shall go on paying dividends, and the debentures will disappear without affecting the dividends very much. We will do full justice to the shareholders, old and new; we shall go on paying off the debentures, but the dividends will scarcely feel the effect of it. We will be just to the shareholders, and a little generous to the old debenture-holders, and within a short period the debentures will disappear. Hence you may look forward to the dividends being a certainty.

Mr. SCHOFIELD asked whether it would not be advisable to make the capital

of the company equal to its requirements, because they required 40,000l. to 50,000l. more than the nominal capital, the capital being sunk in the purchase of the mines and their development. It is not desirable to extinguish the 10 per cent. debt and have the capital represented by the requirements of the company?—The CHAIRMAN: The remark I made was that, looking to the prospects of an improvement generally we could extinguish the debentures. Trade goes in cycles, one period of good trade and another of bad trade. We have had five or six years of bad trade, and we are going to have five or six years of good trade. We have provided against the want of working capital by having a year's supply in advance of coal and coke. That has locked up a great deal more of our money than we should otherwise have done. It is most desirable not to overweigh the company with capital. We have at present a nice handy sum of 200,000l. If we can keep to that it will be sufficient to do our work, and we shall be able to pay you much larger dividends than if we should add to it. Still, we shall be delighted to give Mr. Schofield's idea most serious consideration. I know he has taken a fatherly interest in this company, and we are never above taking advice from a man who gives it in all earnestness and honesty.

The resolution was then put, and carried.

The CHAIRMAN moved the re-election of Mr. Alphonse H. Berthoud as a director. He said that gentleman's knowledge of the copper market had made him a very valuable colleague. He had come into the concern years ago, and had worked for honour and glory, so had the other directors, who for the last 15 years had never received a shilling in fees; therefore they had been devoting their time and trouble, and opening their pockets very wide, to pull what they really believed a good thing into proper position, and they were proud of having done it. (Cheers.)—Mr. JOHNSTON seconded the motion, which was carried unanimously.

Mr. JOHNSTON moved the re-election of Mr. Henry Denison Pender, who had lately resided for six months at the mines, during which time he had made himself perfectly acquainted with them and also with the staff, and this was a combined knowledge which no one else possessed, so that it was of great importance to the directors to have such a colleague. Furthermore, he looked at it as binding the Chairman still more to this company, for if they had got over difficulties it would have been through having a perfectly united board. Without that this company could not have been in existence to-day.—Mr. BERTHOUD seconded the resolution, which was put and carried.

On the motion of Mr. WILK, seconded by Mr. SKELTON, the auditors, Messrs. Harding, Whinney, and Co., were re-elected.

The CHAIRMAN said the shareholders must not separate without expressing their approval of the exertions and the interest which had been shown by the staff in Panulillo. In the death of Mr. Heatley the company lost a valuable officer, but in Mr. Jones they had a successor who had devoted his time and attention thoroughly to the interests of the company. They had had a most excellent report of him, and the best evidence of his desire to do justice to the mine since he became general manager. Mr. Welch was also a very competent man; he had been with the company for some years, and altogether he thought they were very well manned indeed. Thanks to the good management he looked forward to a very good future for Panulillo.—Mr. MORRIS seconded the motion, which was put and carried.

Mr. JAMES said there was a special matter which he desired to bring before the shareholders. For 17 years the directors of this company had worked without remuneration, and had on several occasions made great pecuniary sacrifices to keep the company in existence. At a former meeting he proposed that their remuneration should be taken into consideration, but he was requested by the directors themselves not to proceed, for they said—"Wait until we have something to give the shareholders before you talk of giving anything to us." The Chairman had said they wished to be just and generous to the shareholders, and he thought the shareholders should be just and generous to the directors. (Hear, hear.) They had devoted many years to the patient service of the company without receiving one penny—Mr. Pender and Mr. Johnston for 17 years, and the others for lesser periods. Any shareholder who had held his shares for any length of time must be indebted to those gentlemen that he now had any shares at all—otherwise, the company would have passed into liquidation. It had been developed to its present position entirely through the exertions of the directors; and, therefore, to accept the first dividend without doing justice to those gentlemen would be wrong in principle and in practice. (Hear, hear.) The directors had saved a property worth 200,000l., and he would propose that those who had served the company a longer time should get more. In truth he would not look upon it as a pecuniary consideration, but would propose—"That the sum of 500l. each be presented to Messrs. Pender and Johnston, 150l. each to Messrs. Berthoud and Bond, and that in addition there be paid, for the purchase of a piece of plate, 100l. for Mr. Pender and 50l. for Mr. Johnston, on which suitable inscriptions shall be made, testifying to the permanent gratitude of the shareholders to those gentlemen for their services." That would be 1450l.—no great amount when they reflected that the directors had saved from the wreck 200,000l. (Cheers.)

Mr. SCHOFIELD seconded the motion, but would rather that a lump sum had been proposed, the division to be left to the directors themselves.

The CHAIRMAN said the directors did not look upon this as a pecuniary return at all. It would only be 100l. a year for the whole board. If it were an expression of goodwill on the part of the company, which the new shareholders endorsed, the directors would accept it with the greatest pleasure. If there were doubts whether the thing should be dealt with at all they were equally prepared to meet the wishes of the shareholders. They did not attach value to the money, but they did attach importance to this, and particularly Mr. Johnston, that after the 15 years' labour here they should be able to leave behind them a small evidence of the goodwill of the shareholders who appreciated the labour and work that they went through, although they were not shareholders at the time. It would be an encouragement to other men to do the same under similar circumstances. They would accept the principle which Mr. James had laid down, and the principle upon which the amount was to be dealt with.

It was ultimately decided to vote the directors 1300l. "in recognition of their valuable and faithful services," and that in addition 200l. should be paid for the purchase of two pieces of plate for the Chairman and Deputy-Chairman.

The proceedings closed with a vote of thanks to the Chairman and directors.

RUSSIA COPPER COMPANY.

The ordinary general meeting of shareholders was held at the City Terminus Hotel, Cannon-street, on Thursday.

Mr. RODERICK MACKAY (the liquidator) in the chair.

The notice convening the meeting having been read, the report of the liquidator and committee of shareholders and debenture-holders, with the accounts and the proposed scheme of reconstruction, were taken as read.

The CHAIRMAN said this was the third occasion on which he had had to place a report and accounts before the shareholders as liquidator, and the committee and himself had felt that upon that occasion they could not too clearly and explicitly put the whole of the affairs of company before them. (Hear, hear.) With regard to the accounts, it would be seen that the trade balance of profit and loss showed a slight improvement over the previous year. It would be remembered that when he submitted the accounts last year he told the shareholders that the committee had then a knowledge of the working of the concern from June 30 previous, and they were afraid the accounts now submitted, but then under review, would not be much more favourable than those of the previous year, because they knew that they had had a bad smelting and a bad harvest. They were now five months after the close of their year, and had, therefore, a knowledge of what would be likely to happen during the incoming year. With regard to the accounts, they would see that the smelting works had yielded a larger profit than in the preceding year, owing to the increase of about 5s. per ton received for the copper all round. The local sales of copper had been very good during the past year, and the prices realised at Orenburg were better than they had previously been. Their mines were very large in extent, and he was glad to say that the prospects of their mining were improving, the prospecting having been kept up with considerable success during the past year, and, upon the whole, the mines were looking better than in the previous 12 months, and the ore was of a higher quality than they had had in any previous period. The mines were, however, situated at a distance of about 130 miles from the smelting works, and the year ending in June last had been a very bad one for transporting the ore. The consequence of this was that they had been obliged to use up nearly all the ore they had at the smelting works—ore which had been accumulating there for years past, and was not of the highest quality. Instead of having this in stock it had now been converted into copper and sent into the market; and, though the yield of copper was not so high as in the previous year, it was better to have got rid of these poorer ores. They had now started with a clean stock of copper ore, and they had received a telegram from the superintendent that the transport season had started well, and they had an ample supply of ore at the mines. The transport was effected by the peasants with small sledges, which were drawn by horses. There was, however, a short transport in summer; but by far the larger proportion of the ore was transported by sledges. At Voskresensky for the year to June, 1879, they had smelted 289 tons of copper, which was the largest amount they had ever smelted in one year, but during the past year they had only smelted 260 tons, in consequence of the lowness of the water not giving them a sufficient blast. After most ample consideration the committee had ordered steam-blast machinery from Messrs. Kitson and Co. of Leeds, which would enable them to smelt uninterruptedly when the water was too low to work the blast, and it was expected that this machinery would be ready to begin next season's operations. The manager with confidence assured them that they would be able to produce 300 tons of fine copper during the current year, and from Aug. 14 until the present time the production—88 tons—showed an improvement of nearly 30 per cent. upon the production during the corresponding period of last year. There was every reason to believe that this increase would be augmented rather than diminished, because up to the present time the manager had been dealing with the poor ores, which he was removing before treating the new ores. With regard to the smelting works at Preobrazhensky, these were closed in December, 1879, and the final loss of 774l. made from their working was charged in the accounts. There was no probability of these works being re-opened again, and, therefore, the smelting would be confined to Voskresensky. They had, however, a good supply of timber at Preobrazhensky, which forms a ready sale at Orenburg; but as timber-floating was attended with great many difficulties and risks, the object of the committee was really as far as they could to close the property until such time as they could sell it. Up to the present time they had not been able to secure a genuine and acceptable offer. With regard to the acid factory, satisfactory experiments were being made there, and if it should be proved that copper could be obtained by this process it would be a very good thing for the company. This acid process did not affect their ordinary smelting at all. With respect to the two farms at Voskresensky and Karginskaya, consisting of about 5000 acres in the one case and 1000 acres in the other, these were entirely under cultivation, and were both doing exceedingly well. The past year's farming operations had only shown a small profit of about 1000l., the farming of the current year would show a very large profit. They had been exceptionally fortunate in getting the rains in good time, and afterwards in having fine weather to secure the crops. The prices for the farm produce were now very high, as farther south the harvest had been far less satisfactory than in their districts, and they had two-thirds of the crops still to sell. Mr. Fletcher had been to Russia without any cost to the company,

and had gone thoroughly into every item of the accounts for the past three years, and the Chairman had a full and complete knowledge of the state of affairs of the company with Mr. Fletcher and the superintendent, and the result of their visit was that there had already been a reduction of from 800l. to 1000l. in the general charges, and there would be a still further diminution in the current year. After stating that the fullest information should be given to the shareholders at that meeting or at the offices of the company, the Chairman moved the adoption of the report (excluding that portion of it referring to the reconstruction scheme) and the accounts.—Mr. G. F. LATTY seconded the motion.

A discussion ensued upon the past history of the company, in which remarks were made by Dr. COOK, Mr. HAMMOND, Sir JOHN SWINBURNE, Bart., and Mr. MORGAN. In the course of the discussion general approval was expressed at the conduct of the company's affairs while they have been directed by the liquidator and the committee of shareholders and debenture-holders.

The report, with the omission referred to, and the accounts were unanimously adopted.

The CHAIRMAN then referred to the reconstruction scheme, the full details of which had been sent to the shareholders, and stated that its main features were the re-payment of the Russian mortgage, which burdened the company with a charge of 2400l. for interest, and the reduction of the interest on the 65,700l. of debentures held in this country from 5 to 6 per cent., the three years' arrears of interest being capitalised. Mr. Fletcher and himself had attended a meeting of the principal debenture-holders, held in Edinburgh, and after a very protracted meeting, this proposition was agreed to, on the condition that the shareholders should make themselves liable for 2s. 6d. per share, though it was not anticipated that more than 1s. 6d. per share would ever be required. The interest on the debentures was in arrears, and there is no doubt that the holders could have foreclosed if they had wished to do so. This scheme would leave them with a charge of about 5000l. a year for debenture interest, and about 1000l. for the expenses in England; and from the present position and prospects of the company there was little doubt that this would leave a surplus for the shareholders in the immediate future. The Chairman added that the directors had received assents to the scheme from holders of 14,000 out of a total of 23,800 shares.

The scheme was also advocated by Mr. FLETCHER and Mr. R. H. JONES, who moved—"That the proposed scheme of reconstruction of the company, as read and discussed, be hereby approved, and the committee be requested to take the requisite steps to obtain the sanction of the Chancery Division of the High Court of Justice thereto."—Mr. FLETCHER seconded the motion, whereupon some discussion took place, in the course of which an amendment was moved by Mr. EDWIN MAY, and seconded by Mr. HAMMOND, to the effect that the question of the reconstruction should be deferred for another year.

The amendment was carried by the show of hands, but was negatived by the proxies received in favour of the scheme, and the original motion was thereupon carried.

The SOLICITOR stated that application would have to be made to the Chancery Courts, and a statutory meeting of the shareholders would then be called to discuss the provisions of the scheme; but in the meantime the liquidator and the committee would be very happy to receive suggestions from any of the shareholders who would favour them with their views on the matter.

On the motion of Sir J. SWINBURNE, seconded by Mr. MAY, a vote of thanks was passed to the Chairman and committee, and the meeting then closed.

EMMA SILVER MINING COMPANY.

A special general meeting of shareholders was held at the City Terminus Hotel, on Saturday, to confirm the resolutions passed at the meeting on Nov. 19. Mr. ALEXANDER WILLIAM MACDOUGALL (the Chairman) presided, and said the business must be confined to the object of the meeting. At the same time, however, he felt that it was advisable that he should take the earliest opportunity to inform them that on the previous day Mr. Gager received the following telegram from Mr. Park, under date Dec. 2:—"Cullins is following in work by water. Is on his way to New York, I suppose to order stronger air compressors. Influx of water good indication." Mr. Gager telegraphed, in reply, "Cable fully on Cullins's arrival." When Mr. Gager showed him these telegrams he called the attention of that gentleman to the transparent conjecture involved in Mr. Park's statement that he supposed that Cullins was on his way to New York to order stronger air compressors, and Mr. Gager agreed with him as to the extreme improbability of Cullins making such a journey, occupying five days, for such a purpose. Mr. Gager explained that Cullins was very conservative, his belief was that he had discovered a large body of ore, and that having no code with Mr. Park, he had himself started off to communicate the news to that gentleman in New York. That was Mr. Gager's explanation; but of course there was the other side of the question, and that was that on Mr. Park receiving the supplemental agreement under which Mr. Gager had made the representation that the mine was a vein in connection with the old ore body, and that the workings were being continued in that vein within the lines of the company's patent, he had thought it wise to have the mine flooded again, so that they should not be able to see it. Those were the two points which would occur to one in reading a telegram arriving just prior to a confirmatory meeting. The board, who knew nothing about the mine, could not and did not propose to indicate which way they read the telegram. As to the influx of water being a good indication, as he believed was a common knowledge that in mining work the earth is of a different formation and the water rose up like a fountain miners considered it a good indication, and, therefore, there was a possibility, on broad general grounds, of that being the case. Before they came a decision on the first resolution, and thus confirmed the motion for the voluntary liquidation of the company, he might point out that, supposing by any accident the arrangement they had made should fall through, he did not think the company, which would then revert to its original position, for which the resolutions before them provided, would be at all damaged by having entered into these negotiations; in fact, he rather preferred the position after than before, because the settlement they had made was upon a cash basis. If all the debenture-holders exercised their option and took 2s. 10s. in cash per share instead of the shares which were to be delivered to them, the amount they would obtain from the settlement, added to the other sums, was no less than 78,000l. in hard cash. Instead of leaving the question as to title with Messrs. Snell and Greenleaf, the English solicitors, they had made arrangements, under the advice of Mr. Grosvenor Wood, for the examination of the titles by the most able firm they could select in America—Messrs. Bristow, Burnett, Peck, and Opykko. He then moved the first resolution, winding up the company voluntarily, in order to carry into effect the terms of settlement expressed in the circular letter to the shareholders of Nov. 9. Mr. Dunhill seconded the motion, and in reply to questions the Chairman stated that, under the terms of settlement, it devolved on the liquidator of the present company to form a new company under the Limited Liability Acts, with a capital of 700,000l. in 70,000 shares. He had been elected liquidator, subject to their confirmation, and he would take every care that it should be properly formed; but the time of its formation depended on the terms of settlement being carried out. The resolutions before them provided, in the event of the terms of settlement not being carried out, for the application by the liquidator for a supervision order annulling all liquidation proceedings. The actions in America would not be abandoned, nor would anything be done till the whole of these arrangements were carried out. The shareholders must themselves elect the board of the new company, and he hoped that Mr. Snell would be a member of it. It would have been impossible to fix a date for the completion of the terms of settlement, but it was provided that the agreement was to be carried out forthwith. There would be no unnecessary delay. He believed that Mr. Gager, who was very anxious to return to America, had given Mr. Snell some assurance that he would always furnish them with any information in his possession; but they did not wish to identify themselves in any way as a board with any representations concerning the value of the mine. Unless a debenture-holder exercised his option to take cash, shares would be issued to him; but no money would be paid, and no shares would be issued until the terms of settlement were completed. Mr. Gager had already deposited 49,000l. with him, which would be forfeited unless the balance were received. The resolution was carried unanimously, as were the others, *seriatim*, but they were afterwards passed *en bloc*, to facilitate their registration. The Chairman afterwards announced that thus ended, as far as they knew, the old Emma Company.

HINGSTON DOWN CONSOLS MINING COMPANY.

The 15th ordinary general meeting of shareholders was held at the offices, Queen-street Place, on Thursday.

Mr. EDGAR FIGGESS in the chair.

Mr. J. ELPHICK (the secretary) read the notice calling the meeting. The report and accounts were taken as read.

The CHAIRMAN said the accounts were very clear, and spoke for themselves. The capital was 18,000 shares of 1l. each, of which 10s. per share had been called up, making 9000l. At the time of making up the accounts the calls unpaid were 390l. The liabilities were small, being only 165l. On the creditor side the balance of machinery and plant, as per balance-sheet of April 30, was 3562l.; the amount written off since for depreciation had been 44l. 10s. 7d., leaving a balance of 3517l. 16s. 5d. The amount paid on account of contract for building new engine and boiler houses and the removal and erection of engine and boiler was 400l.; the stores and materials were 231l. 11s. 2d. and the expenditure in the six months had been 848l. 18s. 5d. The stock of ore was 100l., and the cash at bankers was 153l. 9s. 3d. He did not know that there were any further points to which he need call attention, but he should be happy to answer any questions. In conclusion, the Chairman moved the adoption of the report and accounts.

Mr. BLODEN seconded the resolution, and asked whether 75l. would complete the contract for the engine and boiler?—The CHAIRMAN: About 75l. will clear off all there is on that contract.

Mr. BLODEN said that in the last report there was a special paragraph of the mining captain's calling attention to a particular point on the great lode intersected by the great cross-cut, and he then asked Mr. Taylor at what time that point would be arrived at. Mr. Taylor replied he did not think much of that point, but Mr. Hall said that before they arrived at that point something satisfactory might be discovered. In the present report there was no longer any reference to that point, and he would, therefore, ask when it was probable it would be reached, and also whether something would not be discovered prior to that. He had heard it rumoured that there were parties in the neighbourhood of the mine who could point out where discoveries would be certain, but they did not do so, it being supposed that they wanted to purchase the shares at a lower price. He also suggested that instead of making 1s. call at one time and 1s. at another, it would be better to make it 2s. when money was required. He was told that the indications at the mine were good, and that it would be unwise to sell shares at a low price.

The CHAIRMAN said he could assure Mr. Bloden that he had been thoroughly

misinformed regarding the mine being worked otherwise than honestly and straightforwardly by all employed on the mine. The directors had every confidence that the mine was being worked in a straightforward manner.

Mr. RICHARD TAYLOR also said there was not the slightest ground for any suspicion of the kind. In the first place, in the very nature of mining it could not very well be done. They were opening up a new mine in a district in which lodes seldom became productive till a certain depth was attained. In the Hingston Down they were getting down pretty fast, but there must be four or five months elapse before they get to a depth at which they could expect to get profitable returns. Very good speed had been attained in sinking the shaft, and by a report received that morning the depth below the adit level was now 17 ft. The lode called the No. 1, which was the large lode, although at first not so promising as No. 2, was that on which they now had in the shaft itself. That lode had improved considerably. In his report received that morning Captain Richards described that it being one of great promise. In the report of the directors that lode was mentioned as being a promising lode, but it seemed to have improved so much that it was now producing what was called in Cornish phraseology "saving work" for copper ore—that was to say, the material broken in sinking the shaft was sufficiently good to be saved and afterwards dressed. He was in great hopes that before they got to the depth which he suggested they might think it right to drive a level that was 10 fathoms, below the adit level, that even at that depth the lode might be productive sufficiently to make it right that they should proceed to open upon it by levels. It was not thought at first that they could expect anything of value until they got down to the 20, so they might take it as his opinion that the prospects were considerably improved since they began opening the north lode by sinking a shaft upon it, and he believed they were in a fair way to open up a good and productive mine. The means for doing that had been before described to the shareholders, and, therefore, it was not necessary to refer to it further than to say that they had nearly all the machinery and pumps required. The point to which he referred last meeting was the practical effect of the junction of the two lodes—Nos. 1 and 2. On that occasion he hazarded the opinion it might be six, eight, or ten months before such junction could be arrived at, but he had no certain data on which to go. They had not seen sufficiently on the length of the lodes to determine when they would come together. At that time he did not give an unfavorable opinion of the junction, but at the same time he gave a caution that it was a mistake to imagine that whenever two lodes came together they would always form a good body of ore; it frequently did so, but it was by no means an invariable fact.

Mr. STAPLES said that no doubt there were rumours about two years ago to the effect mentioned by Mr. Bladen, but that was because they wanted a practical man like Mr. Taylor to undertake the management. Since the mine had been in Mr. Taylor's hands he had not heard one scintilla of rumour on that point. He might mention that, as one of the largest shareholders, he had had the mine inspected by two experts, and their report was entirely satisfactory to him, and led him to believe that in future Hingston Down would prove a good mine.

Mr. R. TAYLOR, referring to Capt. Thomas Richards, said he believed him to be a thoroughly honest and straightforward man; he had an interest in the mine, and nothing had occurred to diminish the confidence which the board felt in Capt. Richards. He might mention that his own inspection of this mine had been very frequent, and he might say he believed the mine was thoroughly well looked after. As regards the amount of calls, he thought it was more convenient to the body of shareholders to pay up their calls in small amounts as the money was wanted. (Hear, hear.)

Mr. STAPLES expressed his agreement with the Chairman on this point, and said he believed four-fifths of the shareholders would take the same view.

Mr. R. TAYLOR said that for the more speedy execution of the works he might probably before long recommend the adoption of Capt. Penrice's system of tunnelling. Mr. Taylor explained the system, and said it had been found to answer well in West Tolgus.

The resolution for the adoption of the report and accounts was then put and carried, and a vote of thanks having been passed to the Chairman and directors, the meeting broke up.

WHEAL HONY AND TRELAUNY UNITED MINES.

The foundation-stone of the pumping engine-house was laid on Saturday (Dec. 4). The ceremony created a great amount of excitement in Liskeard and district, and was attended by a large number of gentlemen connected with mining interests. The engine to be erected is a 90-in. cylinder, one of the largest in Cornwall; it was formerly used at the Crenver and Abraham Mines, and was purchased by the Hony and Trelawny Company from Messrs. Harvey and Co., of the celebrated Hale Foundry, after a careful inspection and report made by Mr. Matthew Loam, of Liskeard. The company were fortunate in their purchase, as the engine is pronounced equal to new, and the time and money saved is in one case about four months, and in the other to nearly 2000l.—both very important items. At the laying of the stone Mr. PALMER, one of the directors, took the place of the Chairman (Mr. Brockelbank, of London), who was unavoidably absent from ill-health.

Mr. PALMER, in laying the stone, expressed the regret they all felt at the illness of the Chairman. They had met for the performance of a pleasing ceremony—the laying of the foundation-stone of the engine-house, and he sincerely hoped that upon that stone they would raise a superstructure of machinery which should be a profit to the shareholders and the neighbourhood for many years to come. The directors were determined to carry on the mine with energy, and being assisted by a man so well known and trusted as Mr. Loam and by Capt. Hancock he had no doubt they would carry the matter to a successful issue.

Mr. MATTHEW LOAM, the engineer, said they had met to inaugurate what he believed was destined to be a very great and valuable mine. There was every prospect of success, and he wished for success for the sake of those gentlemen who had boldly come forward with their money to develop the mine, for the sake of those who would be employed, and for the sake of the locality which had suffered so severely from the late depression. He hoped the success of the mine would be an inducement and an encouragement to capitalists to come forward and develop mines well worthy, though perhaps not so worthy as that, of being developed. (Applause.) They must all work together, and then the property could not fail to be a success. The proceedings concluded with three hearty cheers.

A dinner was afterwards held at the old Account-house, on Trelawny.—Mr. PALMER presiding.

The CHAIRMAN, on giving "Success to Wheal Hony and Trelawny," said the huge burrows which surrounded them were an evidence of what the past had been, and he was sanguine enough to believe that the future would be as brilliant as the past. (Applause.) The directors had fully determined to carry out the enterprise with energy and efficiency, and to do their utmost to make the mine a great success. They considered themselves particularly fortunate in having associated with them Messrs. Loam and Son and Capt. Hancock, and he was so well known and trusted that his association with the mine would do much towards its success. Capt. Hancock worked there 30 years ago, and he said there was no better property in Europe. (Applause.)

Mr. MICHAEL W. BAWDEN, of Liskeard, in reply, said that as far as those mines were concerned there but one general opinion of its merits, and that as soon as the water was in fork at the different levels they would commence raising ore, and that there was no speculation or uncertainty about the finding ore of a first-rate quality. He had assayed the ore for over 20 years, and he found by referring to his assay books that the last parcel sold from there gave an assay of 16½ in 20 for lead, and 54½ ozs. silver to the ton, realising 24l. 12s. 6d. per ton; so that 1 ton of Trelawny ore was equal to 1½ ton of any other lead mine in the county, and equal to 2 tons of Welsh ore. In bringing his remarks to a close he wished the directors and every shareholder in this concern every success which they deserved.

The CHAIRMAN next proposed "The Health of the Engineer and the Captain," and remarked that since he was there six weeks ago he was astonished to see the progress they had made on surface.

Mr. MATTHEW LOAM, in response, expressed his firm conviction that the success of the mine would depend on those employed on it, and it was a labour of love to him to see the work thoroughly carried out. He remembered the mines in their glory. They were for some years a great source of pride to all connected with them. His father used to say "It is not the mine that is exhausted; it is the patience, pluck, and perseverance of the adventurers." They had large pieces of fresh ground, on each side of which a good lode had been worked, and from this it was clear they had resources of no common magnitude; and as a practical man he could say he knew of no piece of ground with such prospects as those of Wheal Hony connected with Wheal Trelawny. During the depression they had to look out and see whether they could not get appliances to assist the miner, and it was well known that by means of the rock-drill the miner was enabled to do three or four times as much work as he did formerly; and he might say that dressing machinery during the last four or five years had undergone a revolution, not only as regarded cost, but as regarded the more complete separation of the ore. Taking these things into consideration they might congratulate themselves on the prospect. The directors also showed a very lively interest in the progress of the works, and he was pleased to be associated with the manager, for he believed that Capt. Hancock had those qualities of energy and efficiency which were essential to success. (Applause.)

Capt. HANCOCK also responded, and said his great aim was to push on the work as fast as possible, get the water out of the mine and send ore to the market. He believed they had one of the best properties in the county of Cornwall.

Mr. LOAM, in proposing the health of the directors, considered it an honour to be connected with such directors; men who had a high sense of the duties of their trust and felt the warmest interest in the property. He trusted the Chairman of the board would be speedily restored to health. (Applause.)

Mr. PALMER, in returning thanks, did not believe it would be possible to find directors more thoroughly impressed with the value of their property, or more anxious to promote its best interests. He had heard ugly rumours about the difficulty of working the mine, but when he came down here he had a long interview with Mr. Loam, and he went back to London thoroughly convinced of the practicability of the work they had undertaken, and his second visit confirmed his opinion of the great value of the property.

Mr. LOAM then gave the health of the secretary, Mr. H. R. Lewis, and Mr. LEWIS in replying said that when this mine came before him, some time ago, he saw a great future before them, and he was fully convinced as to the value of the property. With regard to the directors, he never saw gentlemen who worked with better spirit, or who had the interest of the shareholders more at heart.

The CHAIRMAN proposed the health of Mr. W. Derry, to whom they would owe much of the success of the mine, for no one worked more indefatigably towards that end.

Mr. DERRY said they had, perhaps, the best set of shareholders of any mine in the county, and they had also men who would do the best for the shareholders and those connected with it had the greatest confidence, and was proud that

he had the honour of proposing Messrs. Loam as their engineer, and Capt. Hancock as their manager. He had known the Messrs. Loam for the last 20 years, and knew them to be practical men; that under their guidance they would have no difficulty in forking the water. If the mines did not give good dividends the shareholders would have a right to complain of the management, because they had everything in that property to warrant large profits. (Hear, hear.)

The health of Messrs. Pearce, of Tavistock, was next toasted, and Mr. JAMES PEARCE, in reply, said that mine they had an exceptional property, and thought that it could not fail to bring success. They were not working in the dark. (Hear, hear.) They had nothing to fear, as the property had been already proved at each end, and they could almost get at the value of the property by measurement. (Hear, hear.) That, consequently, it was not a speculation—it was nothing but an investment. (Applause.)

Mr. LOAM gave the health of the old Cornish tributors, who, he was afraid, were dying out, but who were valuable to Cornish mining.

Mr. SETH COWLING acknowledged the toast. Tributors had very recently brought out a mine which might otherwise have fallen through. (Hear, hear.) Tributors, he thought, ought to be encouraged.

The health of Mr. Bryant, representing the solicitors, concluded the proceedings.

LADYWELL MINING COMPANY.

The ordinary general meeting was held at the offices of the company, Finsbury Circus on Wednesday.

Dr. ANDREW G. BROOKES in the chair.

Mr. F. F. WILSON (the secretary) read the notice convening the meeting. The report and accounts were taken as read.

The CHAIRMAN said, unfortunately the directors had very little to add to what was originally contained in the report that had been sent to the shareholders generally. The efforts that had been made by Capt. Waters to prosecute this mine were unfortunately unavailing up to the present time. The prospects that every now and then appeared to be most promising had proved upon prosecuting the mine further disappointing. Although this is, perhaps, one of the most promising mines in the locality, all their efforts up to the present had failed to open up a lasting mine. Occasionally they got a small body of ore, only to be cut out after a few fathoms investigation. Nevertheless, it would be impossible to say that this mine would not eventually prove to be productive in depth, and they had some considerable reason—based on the opinion of Capt. Waters, as well as some slight knowledge which he (the Chairman) possessed of the neighbourhood—that further south there were deposits of ore. In fact, this was their only hope, and that by prosecuting the mine at the present moment, a slight further exploration would either dispel all hopes or effectually prove the mine. He believed that was the opinion of their manager, and in that opinion he concurred. The board had been discussing the question, and they were of opinion that some means should be adopted to examine the southern part of the mine with a view to see whether the hopes expressed were likely to be realised. What those means should be were for subsequent consideration, and at present he would simply move the adoption of the report and accounts.—Mr. F. F. WILSON seconded the motion.

Capt. Waters said there was one remark made by the Chairman to which he would like to refer—that although they had occasionally come on to bunches of ore here and there in driving the adit level, in developing these bunches they had entirely disappeared. This was not strictly correct. The fact was that the deposits had not proved to be sufficiently rich to justify them in putting the pumping engine to work to drain the adit level. If they should find, as he expected, a good bunch of ore in the direction of the Bog it would be easy to follow the pockets of ore, which so far had not shown a prospect of justifying the employment of the pumping engine. He believed they had ore there, or he would not be at the meeting to advocate the continuance of explorations. They had raised 17 tons of ore out of one little pocket about 14 fms. below the adit the other day. He had expected that they would have got 60 tons from this bunch, and if it had continued rich they would have put the engine to work and followed it; but the lode narrowed out, and he found that it was not of sufficient length to keep the engine at work and pay the monthly wages. He believed, however, as they got south towards the shaft they would find something worth noting. This was in the direction in which they were now driving. In the Roman Gravel they had discovered a course of lead as wide as that room in the extreme south, but in Ladywell they had not yet driven to a point corresponding with the discovery in Roman Gravel. Ladywell adjoined Roman Gravel, and had exactly the same country rocks. He believed that with a judicious outlay their anticipations would be realised.

Mr. WALTER asked how long it would probably take to drive to the point indicated by Capt. Waters.—Capt. WATERS replied that if they had a trifle more money they would be up to the point in about six or seven months, and that would, he believed, fairly prove the mine.

Mr. WALTER asked what that operation would cost?—Capt. WATERS thought 5000 would prove whether the mine was a good one or not.

Mr. WALTER enquired if the 5000 required was in addition to what they had in hand?—Mr. WILSON said it was.

Capt. WATERS added that they had a few tons of ore at surface not washed yet. The report and accounts were then adopted.

The CHAIRMAN said with regard to the raising of some more money, the directors, in their report, stated that "The machinery, plant, &c., on the mines are of value, and if money could be raised on their hypothecation we should advocate its expenditure to prove this southern ground." This was the only mode the directors could, after very careful consideration, recommend for the raising of the money required—to hypothecate that which they had of value on the ground. They considered that it would be infinitely better to do that than to realise it and make something worse of it. This was in the direction in which they were now driving. In the Roman Gravel they had discovered a course of lead as wide as that room in the extreme south, but in Ladywell they had not yet driven to a point corresponding with the discovery in Roman Gravel. Ladywell adjoined Roman Gravel, and had exactly the same country rocks. He believed that with a judicious outlay their anticipations would be realised.

A SHAREHOLDER: Is that on the whole of the property?—The CHAIRMAN: No, on the machinery only. We do not want to raise money on the property of the property. I believe there is a mine there, but the difficulty is to get it.

The SECRETARY remarked that the company had raised and sold ore of the value of about 10,000 from this mine.

Mr. WILSON, in reply to a question, said the directors would be happy to receive applications for some of the unallotted preference shares.

The CHAIRMAN added that they had reduced the costs to the lowest possible and convenient with prudence.

After some further conversation Mr. WALTER moved that the shareholders cordially approved of the scheme of raising the money required as suggested by the directors—by hypothecation of the machinery.—Mr. BALCOMBE seconded the motion, which was carried.

Mr. William Dunn (retiring director) was re-elected, and Mr. H. J. Whaley was re-elected auditor.

The meeting then closed with a vote of thanks to the Chairman and directors.

TRUGO.—At the meeting on Dec. 2 the accounts showed a credit balance of 3s. 3d. A call of 2s. per share, payable by instalments, was made. Capt. G. Carter and James Tamblin reported upon the various points of operation. They have driven a cross-cut 30 ft., and are on the verge of cutting the lode. They very much regret not having done so, as they were in hopes to have reached this point before the meeting. The ground in the cross-cut is very good for copper. It is a blue slate, with leaders of quartz; these leaders containing copper, mangle, and black jack. They will report as soon as possible after cutting the lode. The engine and everything connected with the mine are working well.

BEDFORD UNITED.—At the meeting on Dec. 2 (Mr. H. C. Tate in the chair) a statement of accounts was read, and Capt. R. Goldsmith, after reporting upon the various points of operation, added:—We have laid open some good paying ground in the 115 and 127, and we hope now, as the heaviest outlay has been made and the prospects of the mine are improving, that the financial position of your property will at the meeting in May next be much more satisfactory.

RICHMOND CONSOLIDATED MINING COMPANY.

The report of the directors prepared for presentation at the half-yearly meeting on Thursday next states that since the last report very extensive explorations have been made, and during the half-year ending Aug. 31 no less than 5216 ft., or nearly one mile, of drifts and winzes have been run in various parts of the mine with satisfactory results; another large ore chamber (No. 16) having been opened out on the 20 level and connected in ore with chambers 13 and 14. Chambers No. 13, 14, and 15 have been further developed, and large bodies of ore exposed. Mr. Rickard, in his latest reports referring to No. 14 chamber, says that it is widening out to the east and west, and looks better than it did six months ago (at which time it looked well), although a considerable quantity of ore has been extracted, and that No. 15 has improved in the eastern end, where a winze has been sunk in ground 40 ft. with ore still going down. The 800 and 900 levels are being run on drifts, which are well defined and regular, and show very promising indications for striking ore; several pockets of low grade ore have been struck on the 600, which it is expected will lead to deposits of greater value. All the chambers are looking well and turning out the usual quantities of ore of fair grade. The whole of the cost of these explorations and developments has been paid out of the revenue. Two furnaces have been running continuously, and during the half-year have reduced 22,237 tons of Richmond ore, 6073 tons of purchased ore, and 156 tons of fine dust, together 28,466 tons; the average yield per ton has been 361.42 (Eureka assay value). No. 4 furnace (which smelts principally low grade Richmond ore) purchased ore mixed with the drosses from the refinery has smelted 5278 tons. The total quantity smelted during the half-year is 33,744 tons, yielding 6992 tons of lead, 687,914 ozs. of silver, and 26,605 ozs. of gold. No. 1 furnace has been recently under repair, and No. 2 has been started in its stead.

The quantity of ore smelted by the two large furnaces, as telegraphed weekly, and the gross estimated value of the bullion (gold, silver, and lead) at Eureka assay value from March 7 to Aug. 31, both inclusive were 28,471 tons, and the bullion produced at the works. The returns of the refinery as called weekly, and the gross estimated value of the dross bars (gold and silver), also at Eureka assay value were 31,315,000.

The price of lead continues low, and the stocks in hand have increased largely; 2000 tons, however, were recently sold at 4.65 cents per pound (about 20¢ per English ton), and the latest quotation at New York for small parcels is 4.80 cents per pound. The hoisting works at the main shaft were stopped in August, the

machinery overhauled and put in thorough repair, and a new building of corrugated iron erected over them. Several other improvements and additions have been made to the company's works. A machine shop has been constructed contiguous to the furnace house containing two power lathes, and large radial drill for boring and turning pulleys, shafting, wheels, axles, brasses, and other things, and consequently the company will in future be able to make most of their fittings themselves. A foundry has been erected for making large castings, and this will enable the company to utilise a large amount of old iron which has been increasing on the works for years, and to obtain their castings at a much smaller cost. The underground flue from the furnaces has been lengthened, and the fumes made to pass through a condenser and washed, and all the solid matter is now effectually arrested. The apparatus in the refinery has been enlarged, and now consists of three 50 ton crystallising pots, each flanked by a pair of 30 ton melting pots and one 20 ton crystalliser with a pair of 12 ton melting pots. The large pots are found to wear better than the smaller ones, and a saving of labour and fuel is effected thereby.

The appeal case of the company to the Supreme Court at Washington has been definitely arranged with the counsel of the Eureka Company to be set for the middle of the next. The Atlantic Mining Company in exploring ran a drift into the property of the Richmond Company in August last, when an injunction to restrain them was applied for at once and granted. The debentures of the company having been all paid off, a release of the debenture trust deed has been executed by the trustees and duly recorded. The directors congratulate the shareholders on the continued prosperity and present position of the company, and desire to again record their high appreciation of the services of Mr. Probert and others at Eureka in the management of the mine.

NEW QUEBRADA COMPANY.

The report of the directors prepared for presentation at the meeting on Dec. 23 states that in consequence of the arrangements with the Bolivar Railway Company the accounts for the first six months of the year are practically useless. According to this arrangement, the shareholders are aware that until the prescribed minimum due to the railway company for the year has been paid, this company's net receipts are confined to 40s. per ton of ore, and 6s. per unit of copper in regulus, which though sufficient to meet the expenses of production, interest and redemption fund on bonds, and administration, leave but a small margin besides. After payment of the said minimum for the current year this company's profits begin to accrue rapidly, the railway company being under contract to carry and ship from that time until the end of the year at 30s. per ton of export ore, and 2s. per unit of copper, or 60s. per ton of regulus, at the option of the railway company. It will thus be apparent that the accounts for the first six months of the year must be altogether misleading as an indication of the operations of the company; and as the same principle is involved in the agreement concluded last July, which is to be in force for a period not exceeding twenty years, the board considers an alteration will be requisite in the Articles of Association to meet the altered conditions of the case. The shareholders, however, will have an opportunity of considering the whole matter at the general meeting, to be held about six months hence, when the accounts for 1880 will be submitted in a complete state; they will then probably find it convenient to pass the necessary resolutions.

The output from Jan. 1 to June 30 was 8458 tons, as against 6197 tons in the corresponding period of 1879, the quantity of ore sent to the coast during the same period being 6710 tons, as against 5855 tons in 1879, the relative percentages being 12.50 for 1880, as against 13.0 for the corresponding period last year. In addition 2153 tons of ore, averaging 8.75 per cent. wet assay, were sent to the company's smelting works at the Casa de Teja. But for the difficulties of transport in the earlier months of the year, occasioned by an unusual rainfall, a larger quantity of export ore would have been sent to Buenos Aires for shipment, but the directors are glad to report that the increased deliveries during the later months enable them to anticipate the dispatch of some 16,500 tons of ore during the current year (as against 14,400 during 1879), in addition to which some 6000 tons of ore in the aggregate will probably be sent to the smelting establishments during the year. The enlarged stoping operations have enabled the superintendent to break ore from the various workings without an undue extraction of the high-class ore; consequently it will probably be apparent at the end of the year that the average percentage will be about 1 per cent. of copper less than last year. But this will be of less moment when the quantity of ore sent to the smelting works is taken into account, the benefit of which cannot be realised until 1881.

After detailing the operations in the mines and smelting works the report goes on to say that Aroa and Titara workings are some 2300 yards apart, and from the alignment of the lode (or lodes) wrought at each mine it has often been suggested that the lode might eventually prove to be continuous between the two places. The interval between the country is very much broken, comprising, in short, a series of hills and ravines of an extremely bold and rugged character. At a point about 570 yards north of Aroa, almost in the direct line to Titara, a copper-bearing lode has been discovered in the side of one of the ravines which has been opened out for a distance of 100 ft., and has produced pyrites averaging some 15 per cent. of copper dry assay for the whole distance. The site of new workings is in such convenient proximity to the railway that no difficulty would be experienced in putting down a tramway to bring away the ore, the distance being only about 300 yards from the line. It is right to mention that some stones of ore have been discovered at another point still further north, on the assumed line of lode to Titara, but it is not yet known whether this has any bearing upon the same important subject—the continuity of the lode. The ore sold during the first half of the year realised a higher average price per unit than for the corresponding period of 1879, but is as nearly as possible of the same average as the whole of that year. The sales amounted to 631 tons.

The whole of the company's debentures of £100,000 have been subscribed for and allotted to the public, the expenses attending the operation having been exceptionally light. The shareholders are thus relieved of any possible ground for apprehension in regard to the open debt which existed prior to the last general meeting, but which has now been entirely extinguished by the issue of the new bonds. An application is before the Committee of the Stock Exchange for a quotation, so that the bonds may be marketable in the usual way.

TOLIMA MINING COMPANY.

The report of the directors prepared for presentation at the meeting, on Dec. 21, state that the gross profit for the year at the Frias Mine was 15,083s. 9s. 10d. During that period 528 fms. of ground broken gave 573 tons of ore for exportation, valued at upwards of 40,000s. Since December last the directors have paid three dividends of 7s. 6d., 4s., and 3s. 3d.; and now recommend another 4s. 6d., making 17.0s. 3d. for the year, and will liquidate the back dividends due on the A. shares up to the half-year ending Nov. 30, 1875. The freight charges have been reduced; the mineral is now arriving in this country in shorter time and at less cost than at any previous period of the company's existence.

The assays have proved fairly correct, and a better price for the ores have been obtained from the smelters. The question of smelting the company's ores in Columbia, though not abandoned, has been postponed, pending the development of other properties furnishing mineral in quantities sufficient to render the running of reduction works profitable to local enterprise. In the meantime by the help of the engine-shops have shown a marked improvement in the respect of losses incurred by the company in the last civil war. The returns have fallen off considerably during the last three months, but the board are assured by the superintendent that this is only a temporary state of affairs which will be rectified so soon as the workings can be carried on beneath the 40 on the south lode, and that in the meantime there is every probability of rich ore being opened up in the Main and Esperanza shafts. This encouraging view is confirmed by the company's latest advices, under date of Oct. 16, which state that "the last 4 ft. sink in the engine-shops have shown a marked improvement in the respect of quantity and quality of the mineral existing in the vein, which in the present lode is more or less mineralised throughout a width of 6 ft." The directors have taken a lease for 21 years of the Sabandija Mine, which adjoins the property of the company, and can be worked at a minimum cost by the Frias staff; it has been favourably reported upon by Mr. Gledhill.

RUBY AND DUNDERBERG CONSOLIDATED MINING COMPANY.

At the meeting of shareholders, to be held on Wednesday next, the statement of accounts to Sept. 30 will show a profit on the working of mines of 2012l. 13s. 5d., and 154l. 3s. 6d. has been received for transfer fees; the expenditure in London having been 2544l. 11s. 9d., and the debenture interest 2422l. 2s. 3d., there is an actual loss of 2799l. 17s. 1d. The directors report that considering that the expenditure extends over 15 months, and embraces heavy preliminary workings, as well as many items not likely to occur again, while the incomes from the mines only date from May last, the directors think that the results of the accounts will be received by the shareholders with great satisfaction. The liquidation of the late company is nearly completed, but there are a few points still unsettled. Of these the only items of interest to the shareholders are the claims of Mr. B. S. Bernard, the late joint representative of the company in America. After some negotiations it has been arranged to submit these matters to a committee of shareholders, whose decision shall be final. It is expected that the decision of this committee will be in the hands of the directors before the meeting, when it will be duly announced, and the directors ask power to carry that decision into effect.

The development of the mines appears to be progressing satisfactorily. With regard to the Dunderberg Mine it is stated that the work at Eureka, has been almost entirely confined to the development of this series, where the first important strike of ore was made on March 10 last, and at once communicated to the shareholders. Since then the operations have continued there with successful results, which were necessarily briefly interrupted during August and September by the deepening of the main shaft below the 500, for exploratory purposes, and to enable the economical working of a body of ore discovered in the 500 ft. in August. The Home Ticket Mine was worked from the surface with fair

results for a short time, but under the advice of the superintendent operations thereon were suspended until the cross-cut from the Dunderberg (as recommended by both Messrs. Rickard and Longmaid) was completed. This work is being steadily progressed on the 300. The Bullwacker Mine has only been worked to a small extent, the directors deeming it best to confine operations at present to the Dunderberg series. It is, however, the intention shortly to recommence systematically on the Bullwacker when the company smelts its own ores. The El Dorado Mine has been let on lease, which has been extended too May, 1881, but as yet the efforts of the lessees have been extended with but slight success. The company has, however, under advice located a tunnel site for future operations under the present level of workings. No work has been done on the other mine of the company during the past year.

As regards the furnaces it is mentioned that, as the shareholders are aware, Mr. E. J. Dowlen, a gentleman of much experience in smelting in the United States, was selected by the directors to superintend the company's smelting work. Mr. Dowlen arrived at Eureka in September, and at once proceeded to put the furnaces in thorough repair at a very moderate expenditure. With the view of starting one of the furnaces, the directors in October decided to commence a reserve of ore, and it is hoped that intelligence of smelting being commenced will be received before the date of the meeting.

[For remainder of Meetings, see to-day's Journal.]

THE AURIFEROUS DEPOSITS OF INDIA.

THE TAMBRACHERRY COFFEE ESTATES COMPANY.

The report of the directors, prepared for presentation at the meeting on Wednesday, states that the discovery of gold in Southern India, which was at first supposed to be limited to the south-east portion of Wynad where numerous old native workings were traced, has since been shewn to extend to the Southern and Western districts; which, at the time these native workings existed, and, indeed, up to a recent period, formed a vast primeval jungle. Reports of the investigations of Mr. Brough Smyth, and other mining engineers, in the parts of the districts examined by them, have been fully before the public, and from the information at present before the board there is every reason to believe that the quartz reefs discovered on the properties of the company are equally rich, and have the great advantage of being unworked, and in most cases easily workable at a moderate cost, from the abundance of water power available.

The directors have been fully alive to the importance of following up closely any prospect of gold, and in May last arranged with a practical mining engineer to inspect the reefs then discovered. Arriving, however, during the monsoon, and having but a short time available, he was unable to fulfil his engagement, and a second engineer, Mr. H. Godfrey, who was sent out specially, after consultation with the eminent firm of mining engineers, Messrs. John Taylor and Sons, most unfortunately died on his arrival at Calicut. The directors, however, can announce with satisfaction, that reports are shortly expected from Mr. C. J. Harvey, late manager of the Port Philip Gold Mining Company, as well as from Mr. T. Laing, the Australian engineer, who was selected by Mr. Brough Smyth, for his practical knowledge of quartz mining. The annual general meeting has been delayed till the latest possible period, in the hope of further information to place before the shareholders, but detailed reports, with assays of quartz, can hardly be available before the end of January. A telegram has been received announcing Mr. Harvey's arrival, and good prospects on Charlotte. Mr. Laing, who was to have been on the estates by 15th ult., had been delayed, but was shortly expected.

According to the latest advices, the whole of the estates of the company appear to be more or less intersected by quartz reefs, the most valuable being probably those on the Charlotte estate, which is absolutely freehold, and has the well known Tanote River running directly through it. The Adelaide estate, on which there appears to be a large mass of quartz, is also freehold, excepting a small portion, and on this, together with the Culloor and Annette estates, which are held under utty tenure, the mining rights have been secured. The remaining properties are held under leases of different descriptions, and the mining rights are in course of arrangement. In the settlement of all these matters, which have proved most complicated and troublesome, the directors have derived the greatest assistance from the zeal and intelligence of their manager, Mr. D. Rose. They are also much indebted to their agents, Messrs. Hinde and Co., for the settlement of the mining rights on the Culloor and Annette estates on equitable terms.

Several estates adjoining the company's property have been already disposed of to gold mining companies—the Hump estate, to a Bombay Company, samples from the reef outcrops having shown an average of 5 dwts. per ton. The Lackdie and Madutella estates to the S. of Annette, which have been acquired by the South Wynad Gold Company, show, according to the prospectus, an average yield of 1 oz. 8 dwts. per ton from 6 assays made by Prof. White. Gold has also been found on the Cartapara and Parlacoon estates, adjoining the Charlotte estate on the N. E. The reefs on the Hump estate have been traced directly through the latter estate, and weighable buttons of gold have been roughly extracted by the superintendent.

The directors, however, consider that the time has arrived to develop the great mineral wealth which has been brought to light on the company's property, without relinquishing their efforts to earn fair dividends from the coffee and cinchona under cultivation, and after mature consideration have come to the conclusion that it will be absolutely necessary to wind-up the present company voluntarily, under the Act, as the Articles of Association do not admit of any mining or leasing for mining purposes, and to dispose of the property to a new company. In so doing, they consider it to be of the utmost importance to comply with the regulations of the Stock Exchange, in order to secure a quotation for the shares. As soon as they are in possession of full reports from the mining experts the directors propose to call a special general meeting of the shareholders to carry out the necessary arrangements, and it will be obvious that the immense extent of land held by the company (about 7000 acres) will offer great inducement to investors.

The following Circular has just been issued by Mr. JOHN B. REYNOLDS to his correspondents at home and abroad:—

STOCK AND SHARE DEALING OFFICES.

37, Walbrook, London, E.C., December 9th, 1880.

SIR,—In consequence of the great increase of business at my offices during the last twelve months, and the constantly increasing patronage I am receiving, I have been compelled to extend my business premises.

The numerous offices now occupied by me on the first floor of this building will be a great convenience to my friends generally, and especially to those from the country.

My correspondents can, at all times, have their letters addressed here, when necessary, to my care, and special arrangements will be made for them if they desire to write letters at this place.

The close proximity of Walbrook to the Bank of England, Mansion House, Cannon Street, Cheapside, Cornhill, and Lombard Street, renders it probably the most convenient spot for conducting business connected with the Stock Exchange.

During the long period I have been established in business I have always endeavoured to meet the desires of my customers, and I hope that the result of recent recommendations will be sufficient to prove that I have the best information at command.

I have pleasure in enclosing a little Pamphlet recently issued by me, which is highly commended by the Press; and soliciting your favours.

I have the honour to remain, your obedient and ever devoted servant,

JOHN B. REYNOLDS.

CASSELL'S PUBLICATIONS.—The first part of the new and revised edition of the Popular Educator is in every respect an improvement on its predecessor. In the section on Music, for example, there is evidently an intention to combine the tonic sol-fa system with the ordinary notation, making the keynote or tonic always "doh," and using letters for the localised sounds. The first example is given in the key of D; it would, therefore, have been better, to prevent subsequent confusion, had the clef and signature been also inserted, or the staff omitted until later; however, as thirds and sixths, as well as accents and modulation, are reached in the first lesson, there will be no complaint of waste of time. In the section on Shorthand, again, Pitman's system has been adopted by arrangement with the author, which offers the student enormous advantage as compared with the purely theoretical and practically useless system given in the first edition. The French, German, and other sections are similarly improved. Cassell's Cookery promises to form a good dictionary of the subject in 13 shilling parts. The History of Protestantism extends from the time when Farel entered Geneva until the time of Calvin's battles with the libertines and the meeting of the Council of Two Hundred on Dec. 16, 1547. The Golden Mark, which is the Christmas number of the Quiver, contains a dozen well written little tales, and is entitled to a place amongst the cheapest Christmas gift books.

"HINTS TO INVESTORS," BY JOHN B. REYNOLDS.—It is natural that there should be a run on this little pamphlet, and that a further issue should soon be called for. As it is now being issued gratis it may be presumed that the author did not anticipate any particular notice being taken of it; but the terse style, the line of thought it must suggest, all tend to make it not only attractive but useful. The production can be read in five minutes, but it is evidently the result of years of observation, notwithstanding its brevity is regrettable, but no doubt Mr. Reynolds might easily produce something which would command a large sale, so that on the sale the author might be remunerated. However, it may fairly be accepted as it is, and, as stated last week, it should be read by every investor.

HOLLOWAY'S PILLS are admirably adapted for the cure of diseases incidental to females. At different periods of life women are subject to complaints which require a peculiar medicine, and it is now an indisputable fact that there is none so suitable for such complaints as Holloway's pills. They are invaluable to females of all ages, young or old, married or single. They purify the blood, regulate the secretions, correct all suspended functions, give tone to the stomach, and clear the complexion. The first approach of disordered action should be met with appropriate doses of these pills; whilst taking them no restriction need be placed upon the patient. They contain nothing which can possibly prove injurious to the system. They act by purifying the blood and regulating ever organ.



PARIS EXHIBITION, 1878.

GOLD AND SILVER MEDALS AWARDED for
Steam-Engines & Boilers, also the Special Steam Pump,
and Compound Pumping Engine.

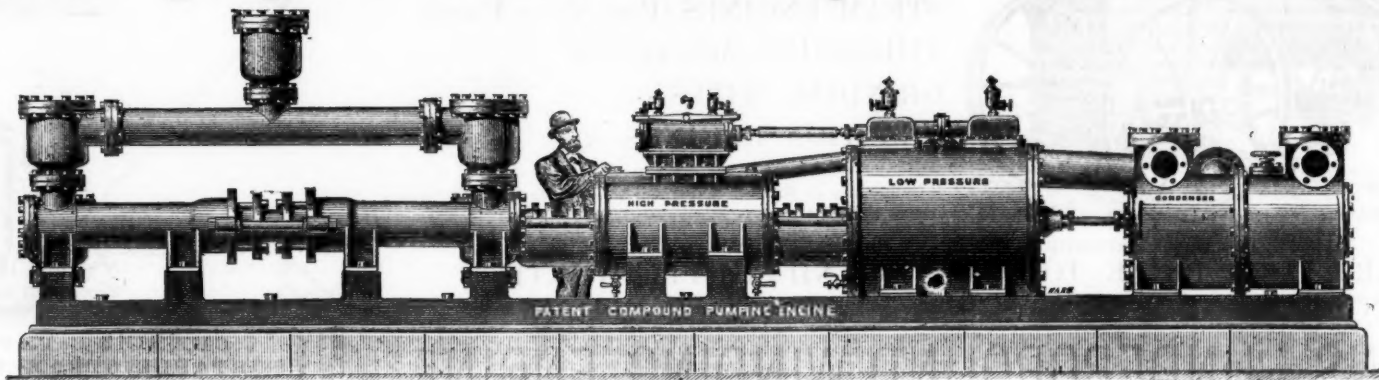


TANGYE BROTHERS AND HOLMAN,

CORNWALL HOUSE, 35, QUEEN VICTORIA STREET, LONDON, E.C.,
AND BIRMINGHAM, (TANGYE BROTHERS), CORNWALL WORKS, SOHO.

TANGYE'S DIRECT-ACTING
COMPOUND PUMPING ENGINE,

For use in Mines, Water Works, Sewage Works,
And all purposes where Economy of Fuel is essential.



TANGYE'S DIRECT-ACTING COMPOUND PUMPING ENGINE, WITH AIR-PUMP CONDENSER.

TANGYE'S COMPOUND PUMPING ENGINE COMBINES SIMPLICITY, CERTAINTY OF ACTION, GREAT ECONOMY
IN WORKING, COMPACTNESS, AND MODERATE FIRST COST.

This Engine will be found the most simple and economical appliance for Mine Draining, Town Water Supply, and General Purposes of Pumping ever introduced, and as regards Mine Draining, the first cost is very moderate compared with the method of raising water from great depths by a series of 40 or 50 fm. lifts. No costly engine-houses or massive foundations, no repetition of plunger lifts, ponderous connecting rods, or complication of pitwork, are required, while they allow a clear shaft for hauling purposes. In this Engine the economical advantages resulting from the expansion and condensation of steam are very simply and effectively obtained. The steam after leaving the high-pressure cylinder is received into and expanded in the low-pressure cylinder, and is thus used twice over before being exhausted into the condenser or atmosphere.

The following first-class Testimonials will bear evidence as to the efficiency and economy of the Engine:—

TESTIMONIALS OF TANGYE'S COMPOUND PUMPING ENGINE.

21' Newcastle and Gateshead Water Company, Newcastle-on-Tyne, Oct. 20, 1879.
36 x 10" x 48" COMPOUND CONDENSING STEAM PUMPING ENGINE.
Messrs. Tangye Brothers.

GENTLEMEN,—In reply to your enquiry as to the efficiency of the two pairs of Compound Condensing Engines recently erected by you for this company at our Gateshead Pumping Station, I have great pleasure in informing you that they have far surpassed my expectations, being capable of pumping 50 per cent. more water than the quantity contracted for; and by a series of experiments I find they work as economically as any other engine of the compound type, and will compare favourably with any other class of pumping engine. By the simplicity of their arrangement and superior workmanship they require very little attendance and repairs, and the pumps are quite noiseless. A short time ago I had them tried upon air by suddenly shutting off the column, and found they did not run away, thus showing the perfect controlling or governing power of the Floyd's Improved Steam-moved Reversing Valve. I will thank you to forward the other two pairs you have in hand for our Benwell Pumping Station.

(Signed)

Yours respectfully,
JOHN R. FORSTER, Engineer.

21' The Chesterfield and Boythorpe Colliery Company (Limited),
Registered Office, Boythorpe, near Chesterfield, Oct. 1, 1879.
36 x 12" x 48" DOUBLE RAM COMPOUND CONDENSING STEAM PUMPING ENGINES.
Messrs. Tangye Brothers.

GENTLEMEN,—Referring to the above, which we have now had working continuously night and day for the last 12 months, we are glad to say that it is giving us every satisfaction. It is fixed about 400 feet below the surface, the steam being taken down to it at pressure of 45 lbs. per square inch. We can work the pump without any difficulty at 28 strokes per minute—224 ft. piston speed. The pumping power is enormous. The vacuum in the condenser being from 11½ to 13 lbs. The pump is easily started, and works well and regularly. The amount of steam taken being much less than we anticipated. We consider the economy in working very satisfactory indeed. The desire for power and economy at the present day will certainly bring this pump into great requisition.

Yours truly,

M. STRAW, Manager.

SIZES AND PARTICULARS.

	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
Diameter of High-pressure Cylinder.....In.	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
Ditto of Low-pressure Cylinder.....In.	14	14	14	18	18	18	18	21	21	21	21	24	24	24	24
Ditto of Water Cylinder.....In.	4	5	6	5	6	7	8	6	7	8	10	7	8	10	12
Length of stroke.....In.	24	24	24	24	24	24	24	24	24	24	24	36	36	36	36
Gallons per hour approximate.....	3900	6100	8800	6100	8800	12,000	15,650	8,800	12,000	15,650	24,450	12,000	15,650	24,450	35,225
Height in feet water can be raised with 40 lbs. pressure per square inch in } Non-condensing...	360	330	160	360	250	184	140	360	284	202	130	360	275	175	122
Ditto ditto ditto—with Holman's Condenser...	480	307	213	480	333	245	187	480	352	269	173	480	367	234	162
Ditto ditto ditto—with Air-pump Condenser...	600	384	267	600	417	306	335	600	440	337	216	600	459	203	203

	16	16	16	16	18	18	18	21	21	21	24	24	24	30	30
Diameter of High-pressure Cylinder.....In.	16	16	16	16	18	18	18	21	21	21	24	24	24	30	30
Ditto of Low-pressure Cylinder.....In.	28	28	28	28	32	32	32	36	36	36	42	42	42	52	52
Ditto of Water Cylinder.....In.	8	10	12	14	8	10	12	14	10	12	14	10	12	14	14
Length of stroke.....In.	36	36	36	36	48	48	48	48	48	48	48	48	48	48	48
Gallons per hour approximate.....	15,650	24,450	35,225	47,950	13,650	24,450	35,225	47,950	24,450	35,225	47,950	24,450	35,225	47,950	47,950
Height in feet water can be raised with 40 lbs. pressure per square inch in } Non-condensing...	360	250	160	118	456	292	202	149	397	276	202	518	360	264	562
Ditto ditto ditto—with Holman's Condenser...	480	307	213	154	603	389	269	198	528	363	269	691	480	352	750
Ditto ditto ditto—with Air-pump Condenser...	600	384	267	191	750	486	337	248	660	450	337	864	600	440	937

PRICES GIVEN ON RECEIPT OF REQUIREMENTS.

Any number of these Engines can be placed side by side, to work in conjunction or separately as desired, thereby multiplying the work of one Pump to any extent.

NORTHERN DEPOT:—TANGYE BROTHERS, ST. NICHOLAS BUILDINGS, NEWCASTLE-ON-TYNE.

TWO GOLD MEDALS.



SOLE MAKERS—

The LEEDS FORGE CO., Ltd.
Leeds, Yorkshire.

FOX'S PATENT CORRUGATED FURNACE FLUES,

NOW APPLIED TO OVER

1000

IND.

H.P.

PARIS, 1878.



PRICE LISTS AND
PARTICULARS
ON APPLICATION.

CLAYTON AND SHUTTLEWORTH, STAMP END WORKS, LINCOLN, & 78, LOMBARD STREET, LONDON.

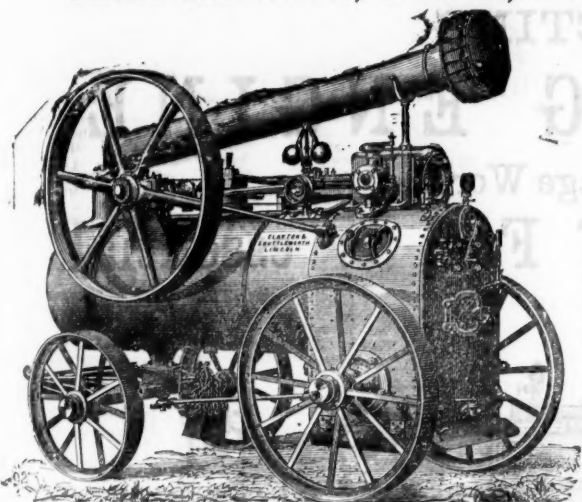
GOLD MEDALS, AND OTHER PRIZES,

Have been awarded to CLAYTON AND SHUTTLEWORTH at the
various International Exhibitions of all Nations, including

LONDON, 1851, 1862,
PARIS, 1855, 1867, 1873,
VIENNA, 1857, 1866, 1873,
for their

STEAM ENGINES (Portable or Fixed).
THRESHING MACHINES.
GRINDING MILLS.
TRACTION ENGINES, &c.

Catalogues in English and in all the Continental Languages
free on application.



The Royal Agricultural Society of England have awarded

EVERY FIRST PRIZE TO CLAYTON AND SHUTTLEWORTH

For Portable and other Steam Engines since 1863, and Prizes at every meeting at which they have competed since 1849.

STEVENS' PATENT UNDERGROUND WINDING ENGINE,

DESIGNED FOR USING COMPRESSED AIR OR STEAM.

SIMPLE, COMPACT, PORTABLE.

Silver Medal, Royal Cornwall Polytechnic Society, 1876.

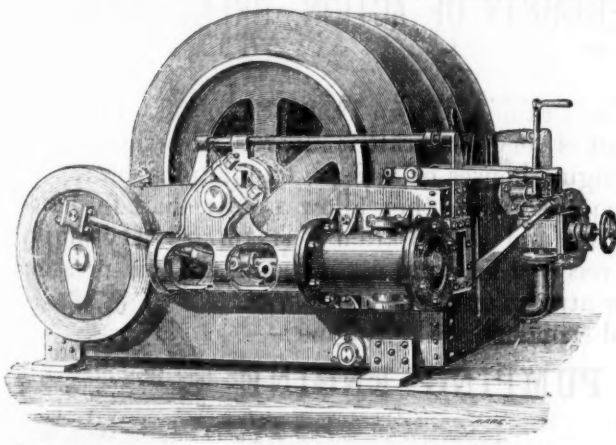
No. 1 size, 7 in. single cylinder, with 2 ft. drums.
No. 2 size, 9 in. single cylinder, 2 ft. 6 in. drums.
A.— 6 in. double cylinder, with 2 ft. 3 in. drums.
B.— 8 in. " " 3 ft. 0 in. drums.
C.— 10 in. " " 3 ft. 6 in. drums.
D.— 12 in. " " 4 ft. 6 in. drums.
E.— 14 in. " " 5 ft. 0 in. drums.

MANUFACTURED BY

THE USKSID CO.,
ENGINEERS, MAKERS OF PUMPING AND WINDING
MACHINERY, AND FORGINGS OF EVERY
DESCRIPTION.

NEWPORT, MON.

Agents for the six Northern Counties—
TANGYE BROTHERS, ST. NICHOLAS BUILDINGS,
NEWCASTLE-ON-TYNE.
[This Advertisement appears fortnightly.]



MANCHESTER WIRE WORKS.

NEAR VICTORIA STATION, MANCHESTER.

(ESTABLISHED 1790).

JOHN STANIAR AND CO.,

Manufacturers by STEAM POWER of all kinds of Wire Web, EXTRA TREBLE STRONG for
LEAD AND COPPER MINES.

Jigger Bottoms and Cylinder Covers woven ANY WIDTH, in Iron, Steel, Brass, or Copper
EXTRA STRONG PERFORATED ZINC AND COPPER RIDDLES AND SIEVES

Shipping Orders Executed with the Greatest Dispatch

GALVANIZED IRON BUILDINGS AND IRON ROOFING.

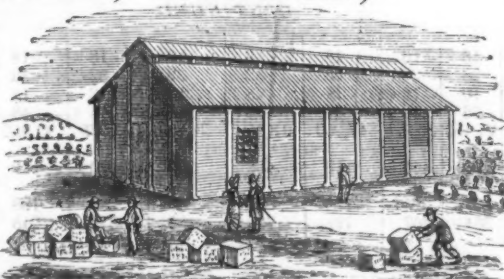
SAMUEL C. HEMMING AND CO., 47, MOORGATE STREET, LONDON,

Manufacturers of every description of IRON BUILDINGS and IRON ROOFING, beg to draw attention to their Speciality of Construction of Iron Buildings, now becoming so generally approved by the introduction of galvanized iron louveres to open and shut, as per sketch (verandah may be added). Any of the spaces in walls can be made into doors, or they can be filled in from top to bottom with galvanized corrugated iron, or with galvanized iron louveres or windows, and with or without light and ventilation in roof.

WORKS: OLD FORD, LONDON.

Numerous drawings may be seen at the Office, 47, MOORGATE STREET, LONDON.

TESTIMONIALS FROM ALL PARTS OF THE WORLD. ESTABLISHED 1851.



JOSEPH FIRTH AND SONS' New Patent Brick-making Machine

Embraces the following advantages—viz.:

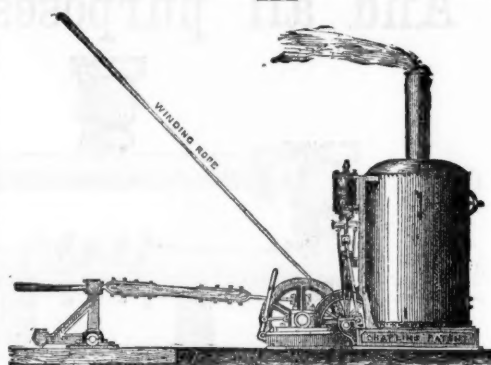
Simplicity, strength, and durability. Compactness and excellence of mechanical arrangements, large producing capabilities, moderate cost.

It makes two bricks at once, and will make 2,000 to 14,000 plastic pressed bricks per day, hard enough to go direct to the kiln without drying; or it will make the bricks thoroughly plastic if required. For works requiring a machine at less cost the machine is made to turn out one brick at once, and is capable of producing 8000 bricks per day.

The Machine can be seen at work daily at the Brickworks of the Patentees, JOSEPH FIRTH AND SONS, WEBSTER HILL, DEWSBURY, as also their Patent Gas Kiln for Burning Bricks, which possesses the following amongst other advantages, viz.:—Economy in Fuel, Rapidity and Quality of Work, even Distribution of Heat, and Total Consumption of Smoke.

[See Illustrated Advertisement every alternate week.]

PRIZE MEDAL—INTERNATIONAL EXHIBITION



CHAPLIN'S PATENT PORTABLE STEAM ENGINES FOR PUMPING AND WINDING.

[SPECIALLY ADAPTED FOR PITS, QUARRIES, &c.
SIMPLE AND STRONG; require NO FOUNDATION or CHIMNEY STALK, and are
EASILY ERECTED or REMOVED.
Sizes, from 2 to 30-horse power.

Steam Cranes, 1½ to 30 tons, for railways, wharves, &c.; hoist, lower, and turn round in either direction by steam.

Stationary Engines, 1 to 30-horse power, with or without gearing.

Hoisting Engines, 2 to 30-horse power, with or without jib.

Contractors' Locomotives, 6 to 27-horse power.

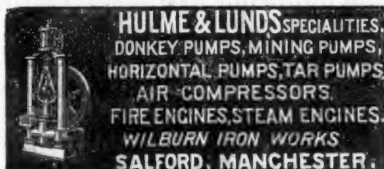
Traction Engines, 6 to 27-horse power.

Ships' Engines, for winding, cooking, and distilling, passed by H.M. Government for half water.

Steam Winches. Engines and Boilers for light screw and paddle steamers.

WIMSHURST, HOLLOCK, & CO.,
ENGINEERS.

CITY OFFICES: 2, WALBROOK, LONDON, E.C.
WORKS: REGENT'S CANAL DOCK, 602, COMMERCIAL ROAD EAST,
LONDON, E. [near Stepney Station.]



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MATHEMATICAL, DRAWING, AND SURVEYING INSTRUMENTS of every description, of the highest quality and finish, at the most moderate prices.

Price List post free.

ENGINE DIVIDER TO THE TRADE.

ADDRESS—GREAT TURNSTILE, HOLBORN, LONDON, W.C.



By a special method of preparation this leather is made solid, perfectly close in texture and impermeable to water; it has, therefore, all the qualifications essential for pump buckets, and is the most durable material of which they can be made. It may be had of all dealers in leather, and of—

HEPBURN AND GALE,
TANNERS AND CURRIERS,

EATHER MILL BAND AND HOSE PIPE MANUFACTURERS,
LONG LANE, SOUTHWARK LONDON

Prize Medals, 1851, 1855, 1873 for
MILL BANDS, HOSE, AND LEATHER FOR MACHINERY PURPOSES.

ALEX. DEL MAR, MINING ENGINEER,

Formerly Director of the Bureau of Statistics of the United States, Superintendent of the United States Special Commissioners of Mines, Mining Commissioner for the United States Monetary Commission, author of a "History of the Precious Metals," &c.,
215, SANSOME STREET, SAN FRANCISCO, CALIFORNIA.
Mining Properties surveyed and reported upon. Assays and quantitative analyses made of ores, &c.

TO PARENTS AND GUARDIANS.

AN ELIGIBLE OPPORTUNITY is now offered for the SETTLEMENT of an ACTIVE YOUNG GENTLEMAN IN CANADA. He will be enabled to obtain his profession as a Solicitor in five, or if he be a Graduate in three years. Cost of living about £150. In the meantime he will have active work, and obtain a knowledge of the Dominion, which is destined to become one of the most prosperous of the Colonies. Premium, £100 sterling.

HERBERT C. JONES,
32, Wellington-street, Toronto.

Canada Land and Loan Agency.

THE GRAND PRIZE, THE TRIPLE AWARD.

Gold Medal, Silver Medal, and Honourable Mention awarded at the Paris Exhibition, in competition with all the World,
FOR MY LATEST PATENTED STONE BREAKERS AND ORE CRUSHERS.

Stones broken equal, and Ores better, than by hand, at one-tenth the cost.

HIGHEST AWARDS
FROM THE
MINING INSTITUTE
OF CORNWALL.

H. R. MARSDEN,

ORIGINAL PATENTEE AND SOLE MAKER OF BLAKE-MARSDEN

PULVERISERS,
BONE MILLS,
MORTAR MILLS
&c. &c.

Improved Patent Stone Breakers & Ore Crushers.

New Patent Reversible Jaws,
in Sections with Patent
Faced Backs.

NEW PATENT ADJUSTABLE
TOGGLES.

OVER 2750 IN USE.

NEW PATENT WROUGHT-IRON CONNECTING
ROD.

New Patent Draw-back
Motion.

NEW PATENT STEEL TOGGLE BEARINGS.

60

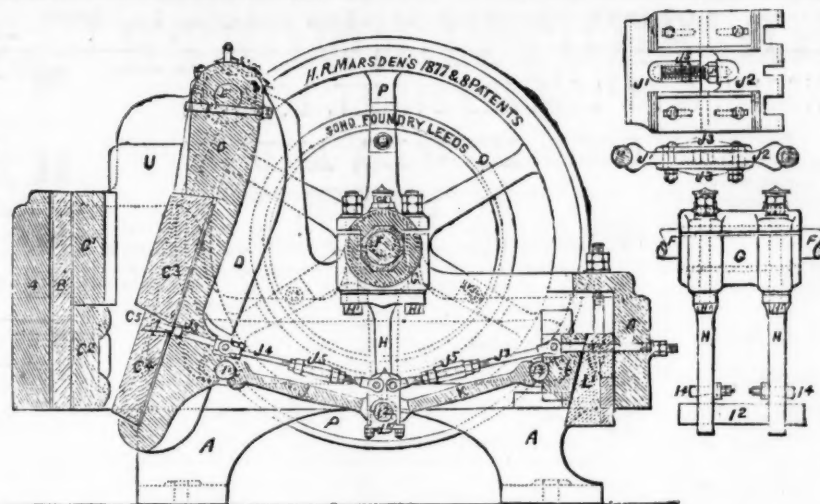
PRIZE MEDALS.

ALL BEARINGS are renewable, and made of H.R.M.'s Patent Compound ANTIFRICTION METAL.

CATALOGUES, TESTIMONIALS, &c.

H. R. MARSDEN, SOHO FOUNDRY, LEEDS.

H. R. MARSDEN will EXHIBIT at the TRURO Meeting of the MINING INSTITUTE OF CORNWALL, his NEW PATENT SPECIAL FINE CRUSHER for reducing all kinds of ORES TO A POWDER AT ONE OPERATION. All those interested in Mining are requested to see this new machine.

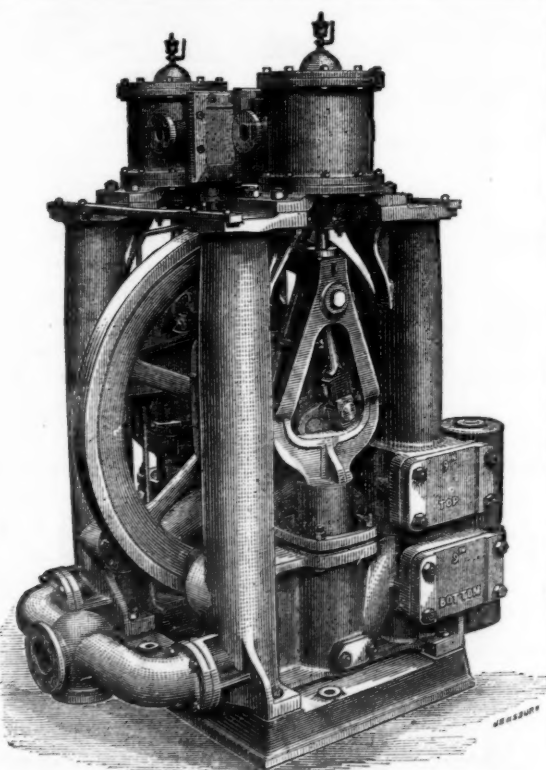


8, Queen-street-place, London, E.C.
DEAR SIR,—We have adopted your Stone Breakers at many of the mines under our management, and are pleased to be able to state that they have in all cases given the greatest satisfaction.

We are, yours faithfully,
JOHN TAYLOR AND SONS.
H. R. Marsden, Esq.,
Soho Foundry, Meadow-lane, Leeds.

St. John del Rey Mining Company (Limited).
A SAVING OF FIFTY-FIVE HANDS BY THE USE OF ONE MEDIUM-SIZED MACHINE.

BLAKE'S STONE BREAKER.—Statement made by the Managing Director of the St. John del Rey Mining Company, Mr. John Hockin, with regard to six months' practical working of Blake's Stone Breaker, affording facility for judging of the relative economy of machine and hand labour in this kind of work, and also of the cost of getting the Stone Breaker to work in difficult places. The price paid to Mr. Marsden for the machine referred to by Mr. Hockin was £180, and adding to this the cost of engine, carriage, and fixing, the aggregate cost to the company of the Breaker in working order was £500. By this outlay the company is enabled to dispense with the labour of 55 people, the value of which is £800 per annum. The cost of working the machine could not be more than the wages of about five men (the machine requires but one man to feed it, so that the rest must be for engineer, fuel, oil, &c.), and allowing for interest on outlay and for renewal when necessary, the saving must be enormous.—*Mining Journal*.



STEAM PUMPS for COLLIERY PURPOSES, specially adapted for Forcing Water any height; also for Sinking; and for Feeding Boilers.

JOHN CAMERON has made over SIX THOUSAND.

WORKS OLDFIELD ROAD, SALFORD, MANCHESTER.

SILVER MEDALS AWARDED AT CORNWALL POLYTECHNIC 1872 AND 1876.

THE WELL-KNOWN PATENT SELF-ACTING ORE DRESSING MACHINERY, as in operation at most of the large Mines in the Kingdom and Abroad, is now supplied solely by THE PATENTEE AND MANUFACTURER, Mr. GEORGE GREEN, Mining Engineer, AT GREATLY REDUCED PRICES; also all descriptions of Mining Machinery, including GOLD AND SILVER AMALGAMATING MACHINERY, complete Stamp Mills, Water Wheels, Steam Engines, &c.

ROLLER SHELLS FOR CRUSHING MILLS—a speciality.

SPECIAL DESIGNS FOR EXPORT AND DIFFICULT TRANSIT.

Prices and particulars on application to the Manufactory, ABERYSTWITH, SOUTH WALES.

Now ready, price 3s., by post 3s. 3d., Sixth Edition; Twentieth Thousand Copy, much improved, and enlarged to nearly 300 pages.

HOPTON'S CONVERSATIONS ON MINES, between Father and Son. The additions to the work are near 80 pages of useful information, principally questions and answers, with a view to assist applicants intending to pass an examination as mine managers, together with tables, rules of measurement, and other information on the moving and propelling power of ventilation, a subject which has caused so much controversy.

The following few testimonials, out of hundreds in Mr. Hopton's possession, speak to the value of the work:—
"The book cannot fail to be well received by all connected with collieries."—*Mining Journal*.

"The contents are really valuable to the miners of this country"—*Miners' Conference*.
"Such a work, well understood by miners, would do more to prevent colliery accidents than an army of inspectors."—*Colliery Guardian*.

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